THE POLITICAL ECONOMY OF REGULATION:

A CASE STUDY OF RICE AND COFFEE MARKETS

IN SIERRA LEONE, 1964 - 1986

by

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ABSTRACT

The thesis is an attempt to analyse the political economy of regulation by examining two commodity markets in Sierra Leone - an importable rice market and an exportable coffee market for the period 1964 - 1986. The main goals of the thesis are:

(i) to estimate the welfare costs of rent seeking in the rice market, and

(ii) to examine producer behaviour in the light of a state monopsony which pays a farm gate price to coffee producers well below the World market price.

The thesis begins with a review of the rent-seeking literature to provide a framework for the empirical work.

A model is constructed for the rice market in which consumers self-select across three segments of the market:

(a) queuing for rice at controlled prices,

(b) paying a politician a premium for a Rice Purchasing Authority (RPA) or "chit", and

(c) buying rice in the free market at higher clearing prices.

A model is also constructed to explain the behaviour of a representative coffee farmer who faces a choice between selling his output in the official market or selling it illegally himself or to traders who smuggle.

The empirical results suggest:

(i) that a substantial volume of resources was allocated to rent seeking (5.3 % of GDP) on rice imports alone in 1986, and

(ii) econometric results confirm that the short-run output response of coffee producers depends on other factors rather than the official (marginal) price of their output on its own.

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Chapter One

PROBLEM AND OUTLINE OF THE THESIS

1.1 Introduction - Why Rent Seeking is Important

The Sierra Leonean economy has been experiencing severe economic and financial difficulties since the early 1980's. The massive decline of the economy is the result of both external and internal factors, including negative terms of trade trends, and other external events as well as grossly inappropriate policies including over-valued exchange rates, export taxation and pricing policies and tribal interest group conflict. These policies are thought to have impacted negatively on supply and the diversification of the economy throughout the 1980's.

The advice usually offered to policy makers in economies in crisis such as Sierra Leone is predicated on an implicit model of a state run by a platonic Guardian. The widely accepted view in the early development literature is that a benevolent state, acting to maximise societal welfare, can intervene in an optimal way to correct market failure and enhance development. Governments in third world economies, especially Sub-Saharan Africa, influenced by this advice, intervened massively in economic activity.

In Sierra Leone, a combination of macroeconomic and sectoral policies were utilised in pursuit of government policy objectives. At the macroeconomic level, the emphasis of policies has been on exchange rate controls and monetary and fiscal policies in support of

growth. At the sectoral level, the approach has been interventionist especially in input and output markets and the regulation of exports through various parastatal agencies. However, these interventions have proved to be ineffective or worse than the disease of market failure that they were thought to cure. Instead of correcting the macroeconomic imbalances, restrictive regulations provided significant opportunities for rent-seeking.

The persistence of policies which affected efficient resource allocation was evidence of the presence of powerful interest groups and coalitions which pushed and pulled the state to pursue policies that created distortions in economic activity. It was also evidence of the increasing responsiveness of government to more vocal groups in Society. For policy analysis, therefore, the state must be seen essentially as a rent-allocating agent and a rent-seeker which utilized its comparative advantage in coercion (Lal, 1988).

The realisation that the state was an arena of distributional struggles among conflicting interests gave birth to the new political economy. Rather than being "an exogenous force trying to do good, (the state) is at least partially endogenous and the policies it institutes will reflect vested interests in society" (Collander, 1984, p2). Economists have sought to explain the existence of private interest groups in society which engage in directly unproductive profit-seeking (DUP) activities (Baghwati, 1982). The main conclusions of this new political economy are:

1. Non-competitive rent-seeking is unproductive and always welfare worsening.
2. The political process is a reflection of the activities of powerful lobbies organised for the sole purpose of engaging in distributional struggles and on the reaction of the government, which allocates the rent-generating opportunities.

3. Rent-seeking activity is directly related to the size of government activity in the economy (Gallagher, 1991) and given the welfare worsening result of such DUP activity and its effects on economic growth, reorienting the role of the state to a provider of basic services via liberalisation of the economy is recommended.

An important problem is to quantify the rents in the economy of Sierra Leone. The present study is confined to the agricultural crops subsector which has two main sub-divisions:

(i) Crops produced for domestic consumption - in this case, rice.

(ii) Crops produced for export - coffee and cocoa.

The major traded food crop is rice. Other food crops include maize and root crops such as yams and cassava. But these are potentially tradable and hence incentives for their production and consumption are significantly influenced by traded food prices.

The main objective of the study is to make a shot of the value of rent-seeking activity in the rice market in 1986. In 1986, reforms in prices and exchange rates which were begun in 1982-83 were intensified. However, whereas the exchange rate was partially market-determined, the government maintained the subsidies on rice and petroleum products to cushion the inflationary effects of devaluation. This was politically expedient since riots in a neighbouring country brought about by huge increases in the price of rice, had led to the overthrow of that government.

1.2 Background of the Economy

Sierra Leone was classified as a least-developed country by the United Nations General Assembly in 1981. It has an estimated population of four million people growing at a rate of 2.7 percent per annum. Per capita income was estimated at US $122 in 1985/86. The distribution of income is markedly uneven and a great majority of the population are estimated to live in absolute poverty. The infant mortality rate of 160-200 and life expectancy of 42 years put the country near the bottom in health indicators. Low levels of social development are indicated by very high rates of illiteracy among the population.

Sierra Leone is one of the smallest countries in Africa endowed with rich mineral deposits, land, labour and rich fisheries. The economy is small and open based on agriculture and mining. Agriculture employs most of the population in low productivity, labour-intensive farming mainly on small holdings. It contributes the largest share of overall economic activity about 40 percent of Gross Domestic Product (GDP) in 1985/86 (see Table 1.1). It is the principal livelihood for about 70 percent of the population and accounts for about a quarter of export earnings in the early 1980s (Table 1.2).

A combination of poor macroeconomic and sectoral policies including unfavourable pricing policy have been the major cause of the decline in output. The transition from a nearly food-surplus to a food-deficit-importing country reflects the failed policies of the past.

The food and cash crop subsector accounts for the largest share of agricultural GDP (Table 1.3) with rice the most important economic and food crop. Agricultural exports, mainly

Coffee and Cocoa accounted for about 51.8 percent of the value of exports in 1980, but have since declined substantially throughout the decade.

Mining is an important sector of the economy, contributing about 18 percent of GDP in 1985/86 although it has declined in recent years. Its products are among the country's major foreign exchange earners. Its main importance in the economy and especially its role as the leading sector in economic development are brought out clearly by its contributions to export earnings and to over 50 percent of total budgetary revenues. Exports of minerals during the 1960s and early 1970s contributed nearly 80 percent of export earnings, with diamonds alone contributing over 60 percent. The industries sector is very small. The manufacturing sub-sector, consists of medium-to-small factories, most of which produce import-substituting goods with a high import content. It contributes about 4 percent of GDP and employs less than 1 percent of the labour force.

The high ratios of external trade to GDP and of taxes and duties on international trade to the total revenue of the government (averaging over 50 percent in the early 1980s) indicate that the country is highly dependent on external trade. Almost all the exports are of unprocessed minerals and agricultural commodities, while the imports consist mainly of food, mineral fuel and manufactured commodities. Most consumer goods are imported, with urban consumption having a high import content. Imports of food include basic foodstuffs such as rice and sugar.

Table 1.1 SIERRA LEONE: Distribution of Gross Domestic Product At Current Prices

1980/81 - 1990/91 (Percentage Shares)

	80/81	81/82	82/83	83/84	84/85	85/86	86/87	87/88	88/89	89/90	90/91
Agriculture	32.3	35.8	38.1	40.1	44.5	39.7	41.0	41.7	40.1	38.3	37.6
Mining & Quarrying	9.9	6.2	5.5	5.3	6.2	18.0	11.4	7.9	6.3	7.6	10.6
Manufacturing	4.6	6.7	6.0	5.1	3.6	3.5	4.8	4.8	6.7	6.6	4.9
Electricity & Water	0.6	0.5	0.6	0.5	0.3	0.3	0.6	0.4	0.3	0.3	0.2
Construction	4.6	3.6	2.6	2.7	2.7	2.4	2.2	1.8	2.7	2.0	1.3
Wholesale & Retail Trade	13.8	11.5	12.9	11.2	16.3	14.3	17.3	21.0	21.2	25.2	21.6
Transport & Communications	16.7	19.0	18.0	17.9	11.7	8.3	9.9	9.2	10.7	11.1	9.5
Finance, Insurance & Business	8.2	8.4	8.2	10.3	9.3	9.1	9.3	9.3	8.9	8.2	13.3
Other Services	4.4	4.2	4.1	3.7	2.2	1.7	1.4	1.5	1.1	0.6	0.4
Producers of Gov't services	5.4	6.0	5.7	4.6	3.9	3.5	2.9	3.1	2.6	2.1	3.2
Less Imputed Services Charges	-0.5	-2.0	-1.8	-1.5	-0.8	-0.8	-0.7	-0.6	-0.5	-2.0	-2.6
GDP at Factor Cost	100	100	100	100	100	100	100	100	100	100	100

Source: Central statistics Office, 1992

Table 1.2 Value of Agricultural Exports, 1980-1991 (Million US dollars)

	1980	1985	1986	1987	1988	1989	1990	1991
Coffee	27.3	25.7	11.6	12.7	15.2	7.5	7.1	2.9
Cocoa	22.7	20.2	12.7	19.2	14.3	10.5	5.7	6.0
Piassava	0.8	0.1	--	0.1	0.1	--	--	--
Palm Kernels	0.2	1.2	0.3	--	0.2	--	--	0.1
Ginger	0.8	0.1	--	--	--	--	--	--
Tobacco	--	--	0.9	0.8	1.4	0.6	1.4	--
Fish and Shrimps	--	--	--	2.5	2.5	1.9	1.2	0.4
Agricultural Exports	51.8	47.3	24.6	35.4	33.1	21.3	14.6	10.9
All Exports	207.1	130.2	128.5	128.5	106.4	141.6	136.8	144.8
Agricultural Exports as % of All Exports	25.0	36.3	19.1	27.5	31.1	15.0	10.7	7.5
Total Exports as % of GDP	25.9	9.7	--	--	8.3	6.1	7.5	7.4

Note: Prior to 1987, tobacco, fish and shrimps exports were recorded under "Other Exports".

Source: Bank of Sierra Leone, 1992

Table 1.3 Agricultural GDP by Subsector in Current Prices, 1980/81 - 1987/88 (Million Leones)

	1980/81	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Food and Cash Crops	293.3	335.9	398.5	526.9	1,471.2	5,130.4	5,130.4	6,482.2
Animal Husbandry	17.5	72.8	108.0	118.1	300.1	300.1	446.9	681.0
Forestry	26.4	53.5	78.1	133.8	285.3	285.3	561.2	1,317.2
Fishery	42.0	56.4	101.4	273.8	831.5	831.5	1,559.8	3,185.0
Total Agri-cultural GDP	379.2	538.6	686.0	1,052.6	2,069.5	2,888.1	7,698.3	11,665.4

Source: Central Statistics Office, 1992

1.3 The Economic Decline of the 1980s

During the first decade after independence in 1961, the economy grew at nearly 4 percent a year. This growth was triggered by investment in mining and in the small import substitution sector. The fiscal and foreign exchange position was healthy, and inflation was low. GDP growth slowed to about 1 percent a year in 1975-80 mainly because of falling incomes from the mining sector.

Expansionary budgetary policies compounded by the effects of rising import costs during the second oil crisis resulted in worsening fiscal and current account deficits and set the stage for the difficulties that surfaced in the following years. In the first half of the 1980s, the economy went into steep decline. Budgetary revenues fell from over 16 percent of GDP in 1980/81 to only 5.4 percent in 1985/86. Decreasing export earnings have resulted in increasing budget deficits financed mainly by borrowing from the domestic banking system which accelerated inflation during the 1980s peaking at close to 170 percent in 1986/87. To protect urban consumers from price increase of basic consumer imports caused by a depreciating currency, the government resorted to various kinds of exchange and price controls. The result is that a rapidly expanding parallel market in foreign exchange and other trade emerged during the period. Government subsidies on imported rice designed to cushion the effect of higher staple prices on the incomes of urbanites created low local producer prices. This led to increased smuggling of rice across the borders where higher prices were offered.

Because of an overvalued exchange rate - combined with effects of declining prices - official diamond and gold exports fell sharply as these commodities were increasingly traded in the

parallel market. Official cocoa and coffee exports also declined as falling real procurement prices offered by the state monopoly made smuggling more profitable.

Development expenditure also suffered tremendously during the crisis. Rural feeder roads are in a state of collapse, and some of the trunk roads are also in very poor condition. This has prevented farmers from bringing their products to urban markets and is an important factor in high food prices. Human resource development has been neglected for many years, with schools and hospitals lacking even the most basic supplies.

In the mid-1980s, a new Government began to address the structural problems in the economy. It launched a comprehensive economic reform program including adoption of a market-determined exchange rate, a liberalized import regime, decontrol of prices for many basic goods and services and a gradual phasing out of all subsidies aimed at structural adjustment combined with restrictive fiscal and monetary policies to stabilize the economy.[1] The Program which was supported by an International Monetary Fund (IMF) standby arrangement in November 1986 was suspended in March 1987 mainly due to a lack of expenditure control and monitoring.[2] Since April 1992, significant reforms have been implemented and the Government efforts have received support from the IMF and the World Bank.

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[1] The commitment was for a termination of all subsidies.

[2] Over the two decades 1966/67 to 1986/87, Sierra Leone concluded eight programs with the IMF. With the exception of the one in 1979/80, they were all suspended before the credits had been fully utilised. (Weeks, 1992)

1.4 Methodology and Limitations of the Analysis

The method of analysis utilized in this study is different from when fuller data sets are available as in developed countries. In the absence of reliable data, synthetic data sets are used and the limited information contained in various studies and Government reports.

In the absence of actual data to compute the true welfare costs of rent-seeking (derived in the theoretical model), a second-best guess--the annual value of the rents--has been used in the estimation. The data base for the estimation and the detailed methodology is provided in Section 5.3.

Rent-seeking is no doubt important, but from an empirical point of view. It is very difficult to calculate the costs of rent-seeking. The costs may be very large in contrast to those associated with traditional calculations of deadweight losses.

Many empirical estimates of rent-seeking measure the size of rents, and then conclude that the costs of rent-seeking in terms of the resources used up in competitive markets equals the size of the rents. This rests on the rather untenable assumption that rents are competitive. But it is the form as well as the degree of competition which affects whether the costs of rent seeking exhaust the value of rents. If rents are auctioned openly to the highest bidder, then we would expect the maximum bid (= cost) to be the value of the rents. But, if competition between rent-seeking agents took place more covertly via bribes and other discreet lobbying (as was the case in the situation to be described here), then with several agents involved the

sum of each of their costs spent on securing the rents could exceed the total value of the rents.

1.5 Review of Chapters

The rest of the study is made up of six other chapters. Chapter two reviews the rent-seeking literature to provide a framework for the empirical work. Chapter three discusses an overview of the type of controls that existed in Sierra Leone during the period. These controls are classified under two headings - goods market and external sector controls. A detailed description of the rice market to show the rent mechanisms in that market concludes the chapter.

Chapter four is the theoretical chapter which explains the model that is constructed for the rice market in which consumers self-select across three segments of the market. In each segment, the associated welfare costs of rent-seeking are theoretically computed.

Chapter five explains the methodology to compute the size of the costs of rent-seeking in the rice market. The empirical estimates are also discussed.

Chapter six discusses the theoretical model constructed to explain the behaviour of the representative farmer who faces a choice between selling his output in the official market or selling it illegally himself or to traders who smuggle.

Chapter seven is the concluding chapter.

Chapter 2

THE POLITICAL ECONOMY OF REGULATION (REVIEW OF RENT-SEEKING LITERATURE AND ITS MEASUREMENT)

2.1 Meaning of Rent Seeking

Rent seeking has been defined as the use of economic resources to capture politically created rents. These activities may entail direct waste of resources (eg. over-investment in capacity to qualify for import licenses or waiting in line to benefit from subsidies or smuggling to avoid custom duties) or transfers (eg. bribes from rent seekers to officials that allocate rice chits). Tollison (1982) defines rent-seeking activities as the "activity of wasting resources in competing for artificially contrived transfers..." (p. 577).

Krueger (1974) first used the term rent-seeking to refer to economic resources that are expended to capture or circumvent government policies that entail the transfers of income or wealth. Krueger develops her model around import regimes with quantitative restrictions where the rents are generated through the allocation of licenses. Her rent-seeking phrase is meant to characterise the activities by lobbies resulting from quantitative policy interventions. Bhagwati (1982) extended the analysis and suggested that the issue was far more general. Bhagwati's taxonomy of policy-intervention related activities includes tariff-seeking, revenue-seeking, monopoly-seeking and other restriction-seeking (or avoidance activities), all of which he classified under the general heading of Directly Unproductive Profit-seeking (DUP) activities. They are legal or illegal activities that give rise or result from economic

distortions with the aim to capture rent or revenue or to avoid the negative incidence of such distortionary activities. Krueger's analysis of rent-seeking activities relates to a subset of Bhagwati's class of DUP activities. Her rent-seeking activities is a legal process of DUP activity undertaken under a fixed import quota and thus excludes other DUP activities such as price-distortion triggered DUP activities (eg. revenue seeking, Bhagwati and Srinivasan, (1980)) or DUP activities that involve evading a policy instrument (eg. tariff-evasion, Bhagwati and Hansen, (1973)). The quantitative restriction counterpart of revenue seeking is Krueger's rent seeking.

2.2 The Social Costs of Price Regulation

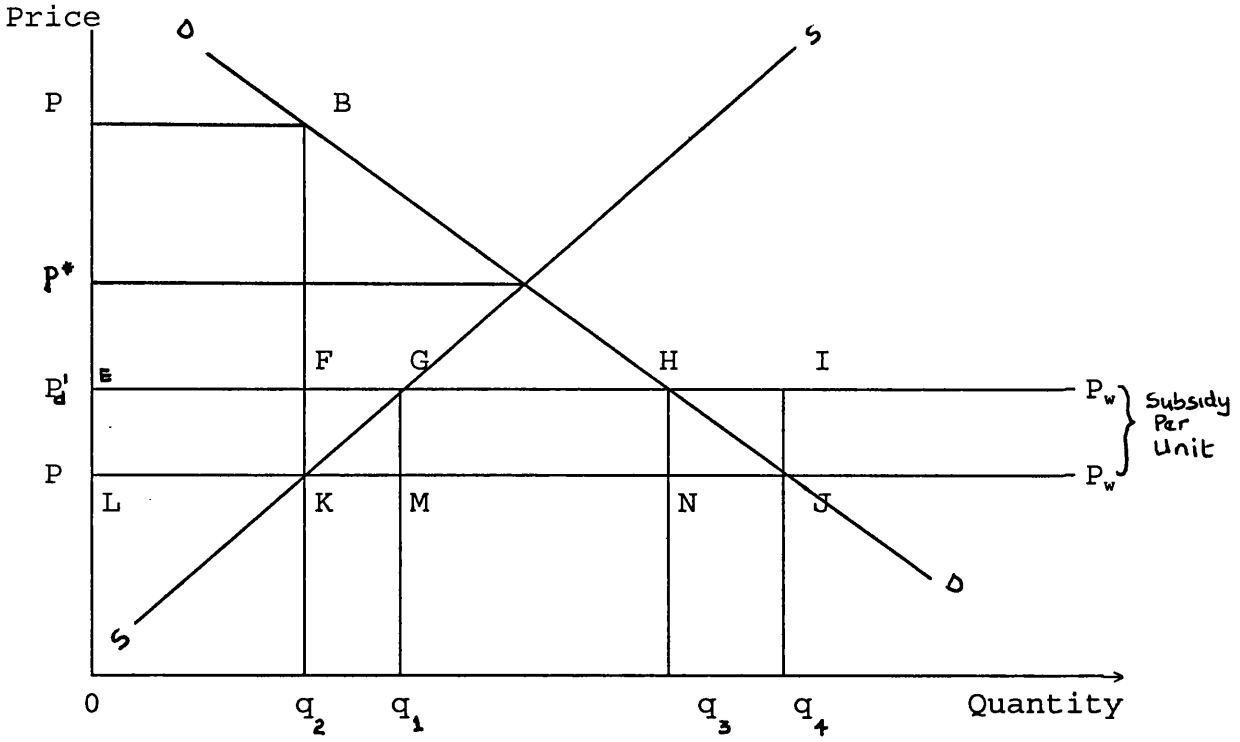
Governments create rents by intervening in markets. The existence of rents produces rent-seeking behaviour which is costly to the economy as a whole. The basic explanation of why such rent-seeking behaviour generates waste is that, to get preferential treatment from government subsidies for example, individuals withdraw real resources from some sector of the economy and spend these resources on rent-seeking activities. These activities bring private benefits to individuals but are socially wasteful for the whole economy since they result in a shrinking of the economy's production possibility frontier. The costs of such rent-seeking activity must, therefore, be included in any measure of the social costs to the economy. The social costs of rent-seeking are illustrated by demonstrating the welfare effects of a consumer subsidy on the price of imported rice (Figure 2.1 below).

the desired price, Pd. The government now intervenes by lowering the c.i.f. price of imported rice in the domestic market. It maintains the lower domestic price Pd and pays a subsidy to the agency responsible for importing and distributing the rice.

If free imports are allowed, consumers respond to the lower prices by increasing consumption (they move from point H to point J on the domestic demand curve) and producers reduce domestic production (they move from point G to K on the supply curve). The adjustments to consumption and production resulting from the subsidies are the direct welfare effects of the subsidy. The standard welfare loss of regulation is given by the usual triangular measure of deadweight loss.

Now suppose that due to the higher costs of imports and the limited foreign reserves available, imports are restricted at q_2 with no domestic supply. At the low domestic price, Pd, excess demand is created equal to $(q_4 - q_2)$. The new domestic free market price is P and the result of the intervention now is that the commodity achieves new value of rent per unit = P - Pd. The usual triangular deadweight loss is area BKJ - the direct welfare effects of the subsidy. But that is not all. Individuals now expend resources to get a share of the revenues resulting from the price intervention (revenue-seeking). The indirect welfare effects of the subsidy results in individuals redirecting other resources in an attempt to capture the benefits of the subsidy. In the situation here, rents are generated through allocation via waiting line or the chit system. Tullock (1967) argued that any resources spent to capture the area of rectangle of rents

Figure 2.1 The Welfare Effects of a Subsidy



Where
DD and SS are the domestic demand and supply of rice respectively,
P is the free market with fixed imports at q_2,
P* is the self-sufficiency price,
PW is the constant world price,
Pd is the domestic price before devaluation
Pd' is the domestic price after devaluation

In the initial situation, with an overvalued exchange rate, rice imports sell at the desired domestic price, Pd. No further intervention is required since the costs of imports is met from domestic sales and no subsidy is paid by the government. (The overvalued exchange rate serves as the consumer subsidy). With a devaluation of the currency, the price of imports rise to the new domestic price, Pd' which is higher than

(area PBKL) were also a social cost and must be added to the standard welfare triangle loss. The area of the rectangle is a measure of the resources devoted to rent seeking and exceed the area of the triangle BKJ. Rent-seeking entails cost in addition to the production and consumption costs of the quota. The additional production cost of the rent-seeking activity may be estimated as the value of the rents.

The logic and analysis are analogous for a country that pays domestic export producers a lower producer price for exports than that prevailing in world markets. The import subsidy becomes an export tax that discourages the production of export crops for which the country has a comparative advantage. However, in this case, the government earns revenue rather than disbursing them. There is a difference in the political economy of the policy. Whereas in the subsidy, individuals spend resources to capture a share of the benefits resulting from interventions, in the case of the export tax, they spend resources to avoid the depredation of the state - they smuggle the crop (tariff evasion). As Bates (1981) puts it clearly, they use the market against the state by using competing channels to market their produce.

Varian (1991) explains that in a single market analysis, the area of the rectangle may not be a good approximation to the total deadweight loss due to rent-seeking. The reason is that in this case, the costs of rent-seeking are made up of "transaction costs" and direct transfers (eg. bribes). Transaction or direct costs (as Gallagher (1991) calls them) are part of the social loss but direct transfers do not generate any deadweight

loss. Hence, in addition to free rider problems, if the production technology of the rents is incorporated, the rectangle of rents overstates the social costs of rent-seeking. The sum of consumer surplus and producer surplus is only an upper bound on costs of rent-seeking. Krueger shows that rent-seeking is always welfare worsening. However, Bhagwati and Srinivasan (1980) show that due to second-best considerations, revenue-seeking may be welfare improving. The reason is that unproductive activity such as lobbying can, and often will, result from the existence of distortions--eg. Krueger's case where distortionary import quotas are sought by premium-seeking lobbies for their windfall rents. In this sense, the diversion of resources into unproductive activity has to be considered in a second-best context. Therefore, such activities may paradoxically be indirectly and ultimately welfare improving.

2.3 Rent Dissipation

Krueger explains that importers will invest in overcapacity to gain import licenses or individuals in over-qualification to secure civil service jobs up to the point where the marginal opportunity cost of the activity is equal to the marginal benefit received through use of import licenses or civil service jobs secured. She showed that with competitive rent-seeking, the rents are exactly dissipated, ie. the production costs of rent seeking equals the value of the rents. The classic way in which rents are dissipated is queues are formed (Barzel, (1974)) and black markets develop for the commodity. In Deacon and Sonstelie (1989)), consumer adopt various technologies

that would reduce the cost of queuing and showed that over-dissipation of rents will generally occur in these circumstances. The extent to which rent seeking dissipates the rents in a socially wasteful manner depends very much on the method of allocation of rents.

2.4 Empirical Estimates of Rent Seeking

For empirical evidence, Krueger calculated the costs of rent-seeking by estimating the premia on import licenses and found that 7% of Indian GNP and 15% of Turkish GNP was absorbed in rent-seeking costs over import licenses only. Mohammad and Whalley (1984) classified rent-seeking by sectors to identify the means of rent-seeking and which markets are affected by rent creation. Their classifications are (i) external sector controls, (ii) goods market controls, (iii) controls on credit markets and (iv) labour market controls. Following Krueger, they calculated the costs of rent-seeking by estimating the premia on commodities sold on the free market and of premia on import licenses. They estimated rent-seeking costs for the Indian economy to be 30-45% of GNP in 1980. Similarly, using Mohammad and Whalley's classification and estimation procedure, Ampofo-Tuffour et al (1991) found rent-seeking costs to be 18-21% and 22-25% of GDP in 1981 and 1984, respectively, for the Ghanaian economy. Despite the use of a crude approximation to calculate the costs of rent-seeking, the results suggest that the costs of unproductive activity can be very high especially for small economies.

Chapter 3

REGULATION IN SIERRA LEONE - AN OVERVIEW

3.1 The Political Economy of the Rents System

Government interventions, controls and policies in Sierra Leone during the 1970's and, especially in the early 1980's, generated huge benefits for private individuals had associated costs for the entire economy. Market interventions in particular resulted in the diversion of resources to the controlled sectors in an attempt to capture the benefits and escape the costs of such interventions. A vicious circle of controls, rent seeking and evasion developed. Rent seeking and evasion occurred because of controls. These activities resulted in a waste of resources and the government responded by a further tightening of controls which intensified illegal activities and so on.

Government market intervention created economic environments which generated rents. The rents were both economically valuable and politically useful. They are political resources used to build political support and control. Public expenditure programmes financed state-owned enterprises which supply basic utilities at low prices and support food subsidies that benefit the politically active or the urban population. Subsidies often resulted from policies of providing cheap goods to urban consumers, especially food to maintain political stability. In this sort of situation, individuals expended

resources to become an exception to controls or to profit from them. For example, individuals who failed to secure supplies at official prices and who could afford to pay the higher free market prices resorted to the free market and paid the full value for these commodities. The beneficiaries then are the importers or those in charge of distributing the commodities. The public officials or the agency may appropriate the rent to themselves by accepting bribes in return for agency appointments to retail the commodities. Export farmers used competing marketing channels to avoid the depredations of the state (Bates, 1981). They marketed outside the official agency by selling illegally to neighbouring countries where official prices were better since they were paid in convertible currency. The persons or agencies empowered to prevent such cross-border trade had an opportunity to share in the rent.

A schematic representation of how the system worked is provided in Figure 3.1. The state is both a rent-generating and rent-allocating agent. It seeks revenue from taxation and subordinates policy to buying support from interest/tribal groups through economic regulation (eg. price intervention). Such intervention generates profits/rents. The attempts to capture the rents results in unproductive activity (eg. lobbying for chits) by both politicians and their supporters. Revenues from taxation and the rents make up the total available resources in the economy - the "pot". Resources were spent on obtaining a larger share of a given "pot" than on the productive pursuits that enlarged the size of the "pot", which diminished the size of the "pot". What makes matters

worse is that the state itself is a rent-seeker. Its predatory policies extracted the surpluses of export producers and consumers.

Thus, government market intervention which generated rents and the allocation of such rents were all parts of the political economy of rent-seeking in Sierra Leone.

3.2 Controls and Sources of Rent Seeking

Rent seeking in Sierra Leone is a result of control of economic activity by the government. Price setting of goods, subsidies, attempts to ration foreign exchange and import bans have had a counter-productive effect in the economy. It resulted in the diversion of substantial resources to compete for the excess profit that accrued to the controlled commodities. An extensive parallel economy flourished in the midst of controls and the official economy shrunk. It is thought that 75 percent of the economy operated outside official channels. In this section, an overview of the main areas of controls and policy intervention in the economy is provided. These controls are grouped under the headings of goods market controls and external sector controls following a similar classification in Mohammad and Whalley (1984).

3.2.1 Goods Market Controls

Government intervention in imported consumer goods ranges from setting official retail prices, increasing supply through importation and organising distribution channels. But given excess demand, only limited supplies are available from official sources at the low prices. Additional supplies are obtainable at higher prices from the free market where commodities resell at a premium in excess of 100 percent.

Intervention in local food crops is much more limited. Purchase and sale is handled by the private sector. Government intervention is limited to setting official producer prices and organising distribution. But low producer prices have resulted in low purchases by the government agency since producers have sold to private itinerant traders who paid higher farm gate prices.

3.2.2 External Sector Controls

The main trade policy instruments are import tariffs, export duties and quantitative restrictions on imports and exports. Quantitative restrictions occur either in the form of import and export bans on particular commodities, or specific licenses required for the import or export of given commodities.

The main objective behind controls in the early 1980's on exports was to increase the

amount of foreign exchange available to the official system for allocation to priority sectors, while import controls were designed to raise revenue for the government rather than to protect domestic industry. Import and export regulations were frequently changed during the period.

Overvaluation of the exchange rate by domestic policies has been pervasive in the economy up to the early 1980's. The overvalued exchange rate provided an implicit subsidy to urban consumers who now buy cheaper imported food and those individuals who had access to foreign exchange since they paid less for foreign exchange than it would cost at a market rate of exchange with local currency.

In the absence of effective controls and since costs are minimal, a parallel underground market for illegal foreign exchange transactions developed where the price is higher. The domestic cost of imports reflected the black market rate for foreign exchange as are domestic prices. The depreciated black market rate encouraged smuggling of both agricultural and mineral exports. At the same time, imports above the officially approved levels were smuggled in at higher black market costs which were passed on to consumers. An extensive parallel market in goods and foreign exchange thus developed.

From 1983, the government addressed problems of the declining economy through exchange rate adjustments. In December 1982, the leone was linked to the US dollar

instead of the Special Drawing Right (SDR) and a dual exchange rate system was introduced which involved an effective devaluation of 50% of the leone. Depending on the type of activity or use of foreign exchange, the official or commercial rate was applied. The modification of the exchange rate was with a view to improve the balance of payments situation as well as curtail the large scale smuggling in the country. The measure was inflationary and prices of basic essentials (including rice) rose as well as other imports. (Inflation averaged about 75% in the first half of the 1980s, see Table 3.1). Importers who obtained foreign exchange at the lower rates to import goods were selling their products at the higher rates resulting in huge profits. A vicious circle developed. A parallel market existed because of perception of overvaluation of the currency by the trading community due to the existence of large payment deficits and a severe shortage of foreign exchange. This, in turn, discouraged the inflow of export earnings into the banking system and encouraged parallel market transactions. Thus, excessive demand for foreign exchange, capital flight and the growth of parallel markets in foreign currency were consequences of foreign exchange controls.

Given the futility of continuous adjustments in the face of an increasing parallel market premium, the government introduced a freely floating exchange rate system in June 1986 in the context of an agreed adjustment programme with the IMF. The adjustment measures resulted in a considerable erosion in living standards and have intensified parallel market activities in retail trade and foreign exchange. In the hope of

dampening illicit trade in commodities, the government banned the import of merchandise not paid for with currency obtained at a commercial bank. Despite these measures, the government was on the whole unsuccessful in bringing the extensive "parallel economy" under control during the period.

FIG. 3.1: FRAMEWORK OF MACRO-POLITICAL ECONOMY OF SIERRA LEONE

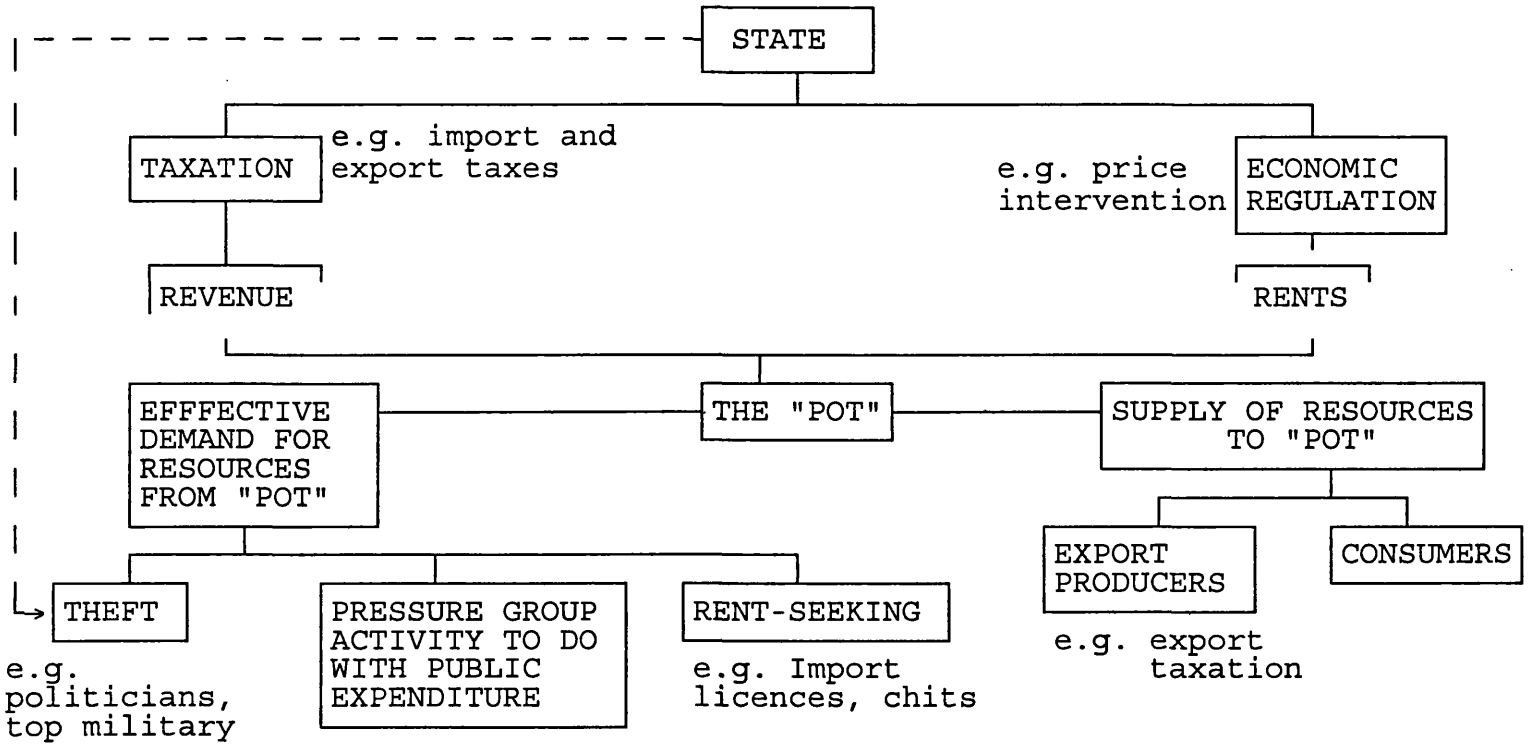


Table 3.1 Imported Rice Prices , Exchange Rates and Cost of Living Index, 1979-1989

Years	Official Price (Le/Bag)	Free Market Price (Le/Bag)	Official Exch. Rate (Period average Le/US$)	Black/Parallel Market Exch. Rate (Le/US$)	Cost of Living Index (1978 = 100)	Annual Percentage Change
1978	21.50	-	1.06	1.11	130	13.0
1980	21.50	-	1.05	1.40	161	23.8
1981	25.20	30.00	1.16	1.70	204	26.7
1982	28.00	35.00	1.24	1.90	342	67.6
1983	45.00	50.00	1.89	3.40	573	67.5
1984	60.00	85.00	2.51	4.30	1011	76.4
1985	70.00	150.00	5.09	7.70	1829	80.9
1986	85/170[a]	270/500[b]	16.09	27.08	5097	178.7
1987	350	800/1000	34.04	100.00	14,200	178.6
1988	-	-	32.51	131.61	18,840	32.7
1989	-	-	59.81	180.90	30,666	62.8

NOTES
- - data not available
- a price data refer to average prices in Urban Freetown.
- b price raised in the second-half of the year
- c inflation measured by the Freetown cost of living index on a calendar basis.

SOURCES:
1. Price data are from various reports of surveys of outlets in Urban Freetown.
2. Official Exchange Rates from International Financial Statistics Yearbook, 1993, International Monetary Fund (I.M.F.).
3. Black / Parallel Exchange Rate are from World Currency Yearbook, 1985, International Currency Analysis, Inc., Brooklyn, N.Y. and African Development Indicators,1992, The World Bank, Washington D.C..
4. Cost of Living Index extracted from Weeks, 1992, Table 4.2, pp. 46.

3.2.3 Control of Export Crops

The marketing channels and domestic producer prices of exports are determined by an officially state-controlled Marketing Board. Under this marketing system, producers must sell their crops to the agency at official prices lower than the prevailing world price. The revenues generated from the export tax were initially used to assist in the development of the agricultural industry. However, as the economy deteriorated and inflation soared, the export tax revenues were diverted to finance the purchase of consumer imports and to support food subsidies for the urban elite.

Throughout the 1980s, the producer price shares for coffee (Table 3.2) have been consistently low. (The producer price shares for other exports seem to have exhibited similar trends during the period). This implicit taxation of export crop producers contributed to the decline in official purchases since low official producer prices discouraged area expansion, the uptake of innovations, and increased smuggling given better prices in neighbouring countries. Despite the substantial increase in producer prices announced during 1983/84 to 1985/86, the agency recorded only a small increase in purchases, since prices still remained depressed in real terms even though competitive with neighbouring countries.

Table 3.2 Coffee: Prices and Producer Price Shares, 1979-1989

Years	a	b	c	d = bxc	c = a/d
1979	1.89	372.90	1.11	4.13	0.46
1980	1.76	331.56	1.40	4.64	0.38
1981	1.32	254.80	1.70	4.33	0.30
1982	1.43	276.34	1.90	5.25	0.27
1983	3.80	281.47	3.40	9.56	0.39
1984	5.29	310.73	4.30	13.36	0.39
1985	8.82	293.63	7.70	22.60	0.39
1986	52.91	374.62	27.80	101.45	0.52
1987	52.91	236.10	100.00	236.10	0.22
1988	52.91	253.24	131.61	333.28	0.16
1989	70.55	200.86	180.90	363.35	0.19

Notes

a is the nominal / official producer price (Leone/Kg),

b is the world price of Brazillian coffee (US cents / Kg quoted in N.Y. (conversion factor 1 Kg = 2.2 lbs),

c is the official exchange rate (period average),

e is the producer price share, defined as the ratio of the nominal producer price to the product of (b) and (c).

Sources: For all the nominal / official producer price, the world price and the parallel exchange rate, see data sources in Table 6.1 (a), pp.107. Others are author's computation.

3.3 Rent Seeking in Rice - A Case Study

3.3.1 Rice Trade and Price Policies

Rice is the main staple food crop consumed by all age groups in Sierra Leone. It is the nutritional well-being of the poor (a substantial proportion of the population). In the mid-1970's it accounted for over 50% of the total food availability in the country and is grown by over 85% of the total farming population. (In addition, subsidiary food crops such as cassava, maize, ground nuts, etc. are also grown). The development of the rice sector is, therefore, of vital importance to the economy of Sierra Leone since the extent of foreign exchange reserves and the size of the budget deficit hinges around the price of rice.

By the late 1970's, the agricultural growth rate (-0.54% per annum) was less than the growth rate of the population (2.7% per annum) and food imports began to rise sharply. Between 1962 and 1970, production of rice increased by 7.5 percent per annum, but this increase occurred from a low base, necessitating a growth in rice imports of 18.2 percent per annum to meet the needs of a growing population. Population growth accelerated some what during the decade of the 1970's which, coupled with a decline in both domestic production and imports, led to a decrease in recorded per capita consumption of rice. Since then, per capita rice consumption has declined from a high of 125 kg/cap/year in 1979 to 98.2 kg/cap/year in 1990.

In the mid 1980's, the government increased the flow of subsidised credit to rice imports and its imports have been supplemented by sale of concessionary food aid (eg. PL 480 and EEC

rice). Three factors have been responsible for the large increase in rice imports: (a) the profitability of rice imports to the responsible agency which, unlike private traders, had both the monopoly and the access to foreign exchange; (b) the combined impact of successive crop failures and declining domestic production; and (c) the low producer prices paid to rice farmers which resulted in a substitution to other root or tree crops. Rice imports were mainly targeted at urban consumers who benefitted through subsidized prices.[3]

Government intervention in the marketing of rice started when the Sierra Leone Rice Corporation (SLRC) was set up in 1965. The mandate of the corporation was to organize production, processing and distribution of domestic rice, with intermittent imports during years of shortages. The stated objectives of policy was to encourage increases in rice production by providing stable and remunerative prices to farmers while ensuring adequate supplies of good quality rice to consumers.

Data on rice marketing in Sierra Leone is scanty but the available figures for purchases show that during its existence (1965 - 1979), SLRC bought an insignificant proportion of domestic rice. Much of the domestic rice was marketed by private itinerant traders who were able to compete effectively with the corporation by offering better prices than those paid by it to farmers. The rise in producer prices in 1975 had the effect of making the corporation competitive in the domestic market. It was able to purchase enough domestic rice such that

[3]Whereas the shortfall in production is explained by the above factors, the sharp rise in imports were due to a combination of increases in demand due to demographic changes and reexportation (through smuggling) to neighbouring countries where better prices were paid.

an insignificant amount of rice (less than 500T) was imported in that year.[4] Thus, Sierra Leone was self-sufficient in rice for those intervening years.

The corporation handled all imports of rice which it sold to licensed wholesale merchants at fixed retail prices. The prices were fixed to allow the corporation a large market margin which was subsequently reduced in the later year of its operation. The agents were expected to resell the rice at prices recommended by the corporation. But once the rice left the warehouses of the corporation, it had no control over the prices at which it was sold. The available series on retail prices indicate that consumer paid higher market prices in the free market above those recommended by the corporation. Due to import restrictions and lack of control over prices, urban retail prices have been kept at a consistently higher level.

In the late 1970's, government minimum controlled prices on rice provided the corporation a small market margin. With high operating costs, the corporation incurred huge financial losses which, coupled with mismanagement, led to its liquidation in 1979. Following the closure of SLRC, its activities were transferred to the Sierra Leone Produce Marketing Board (SLPMB).[5] In spite of these organisational changes, no fundamental change in rice marketing and policy actually occurred. The official purchase price of domestic rice offered by the board continued to be set very low and was not supported by the government as a

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[4]It is important to note that urban consumers benefitted from government intervention in the rice market not through a price subsidy per se, but through exchange rate policy. Domestic selling prices were determined by converting the CIF values of imported rice to domestic currency using the official exchange rate, rather than the parallel rate, thereby effectively underpricing rice to consumers (Weeks, 1992).

[5]Some observers argue that the fall in rice imports is due to a reduction in domestic demand due to the higher domestic prices of rice.

flow price. To secure low prices for rice, the Board diverted its export tax revenues for the subsidisation of rice imports at the expense of export producer prices.[6] In early 1989, lack of funds for procurement led to suspension of all domestic rice purchases. Instead, the board concentrated its efforts on imports of rice because of their high profitability and their low overhead cost.

The Board's import prices had an effect on its intervention prices for domestic rice. The available data show that between 1979 - 1982, like its predecessor, the Board bought an insignificant quantity of domestic rice due to lower producer prices. The domestic rice trade continued to be dominated by private traders who paid higher prices to farmers. To ensure that consumers benefited from the subsidies, the Board increased supplies to urban centres through appointed rice agents who sold the rice at prices determined by a Rice Committee Chaired by the President.[7] Thus, between 1980 and 1985, the retail price of rice changed gradually from Le30 to Le70 per bag over the period (see Table 3.1). However, the Board did not have much success in controlling supplies. The existence of excess demand at home and in neighbouring countries and because the commodity is transferable, resulted in supplies being diverted into black markets where higher than market prices were paid. Thus, parallel markets consequently grew alongside official markets. Consumers whose demand is more than satisfied at official prices resold the excess in free markets at higher prices. In 1986, for example, with the floatation of the leone and the partial removal of the subsidy on rice,

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[6]The SLPMB also dominated export of cash crops. Until 1990, the marketing board was the sole exporter of cocoa, coffee and palm kernels.

[7]This is a sub-committee of the cabinet set up to do a regular review of the price of imported rice and the establishment of appropriate institutional arrangement for its distribution.

this pushed up the free market retail prices to almost three times the official levels with alarming increases in the cost of living.

Since official prices did not allocate supplies and given the problems of distribution through rice agents, the government introduced additional supplies by issuing quotas to politicians, Senior military, corporate bodies and institutions. The politicians were to resell the rice at government recommended prices by issuing rice chits.[8]

3.3.2 Identifying Rent Seekers

The existence of parallel markets alongside official markets for rice generated rents for those who secured the rice in bulk from agents or politicians. This is expected to generate rent seeking for rice supplies and chits.

The burst of rent seeking activities for rice supplies and chits during the period usually occurred in the first and last week of each month. During these periods, the offices of politicians, senior civil servants, and senior military and the SLPMB were filled with crowds of individuals looking for rice chits or supplies. Those who had formed personalised relationships with members of the Board Management or politicians were assured of monthly rations. This, in essence, suggests that the authorised rice agents and politicians shared the rent generated with middlemen (mainly market traders) who paid for the chits and resold at the higher free market price. Such benefits from rents on subsidised rice attracted a large

[8]The rice "chit" was an authority to pay for a specified number of bags of rice for quantities ranging from two bags and upwards.

number of individuals to the retail trade in rice during the period, especially those in official government employment.

The wage earning class counted among the poorer sections of urban society in Sierra Leone. Following the adjustment measures adopted in the early and mid-1980's, public and private sector salaries were increased several times (see Table 3.4). These increases, however, did not compensate for the rapid increases in the cost of living. Thus, wage earners lost real income in the mid-1980's to the extent that the average wage income would have consigned an urban family to the deepest poverty (Weeks, 1992). For example, in 1986, the average family would have exhausted it monthly wage on a bag of rice alone. As a result, most Sierra Leoneans in formal employment in urban areas were forced to supplement their incomes in any way they can including parallel market retail trading in controlled commodities, moonlighting and other illicit activities. They left their formal employment to spend time in offices of politicians and senior civil servants in search of chits for rice and other controlled commodities. There are no recorded data on rent seekers but the numbers of individuals involved in these activities must have been very high during the period. It is common to find members of the professional classes (teachers, nurses, junior civil servants), informal sector entrepreneurs, school kids and university students competing for chits for rice and other controlled commodities from those who issued them. Hence, rent seeking activity diverted labour, time and effort from productive pursuits into unproductive activities. This must have imposed huge costs on the economy.

In the late 1980's and 1990's, following an IMF stabilisation programme, domestic prices have been freed, the import trade (including rice) has been liberalised and the exchange rate

is now market-determined. The liberalisation of rice import trade has opened the rent-seeking process to intense competition and reduced profit margins. The official market has been eliminated as have rice shortages. The queues for rice and chits have since disappeared with its associated unproductive activity.

Table 3.3 **Production, Import and Per Capita Consumption of Rice, 1961-1990 ('000 MT)**

Year	Paddy	Milled Rice Equiv.[a]	Imports	Total Supply	Pop. ('000')	Per Cap. Cons. (kg)
1961	264.0	150.3	4.2	154.5	1,383	111.7
1962	270.0	154.1	27.3	181.4	2,033	89.2
1963	315.0	179.4	21.0	200.4	2,084	96.2
1964	331.0	188.5	0.5	189.0	2,136	88.5
1965	373.0	212.4	12.9	225.3	2,189	102.9
1966	399.0	227.2	35.1	262.3	2,244	116.9
1967	434.0	247.2	24.2	271.4	2,300	118.0
1968	468.0	226.5	17.2	283.7	2,358	120.3
1969	426.0	242.6	12.6	255.2	2,417	150.6
1970	507.0	288.7	44.8	333.5	2,477	134.6
1971	458.0	260.8	27.5	288.3	2,539	133.5
1972	500.0	284.8	5.2	290.0	2,603	111.4
1973	477.0	271.7	43.7	315.4	2,668	118.2
1974	473.0	269.4	45.0	314.4	2,735	115.0
1975	479.0	272.3	5.0	272.8	2,803	97.3
1976	620.0	325.4	15.0	340.4	2,890	117.8
1977	641.0	336.4	6.7	343.1	2,970	115.5
1978	641.0	336.4	22.7	359.1	3,053	117.6
1979	599.0	314.4	76.5	390.9	3,138	124.6
1980	556.0	291.8	44.5	336.3	3,225	104.3
1981	523.5	274.8	73.2	348.0	3,315	105.0
1982	523.5	274.8	70.7	345.5	3,407	101.4
1983	460.0	241.5	36.2	227.7	3,502	79.3
1984	504.1	264.6	103.7	368.3	3,600	102.3
1985	428.0	224.6	118.3	342.9	3,700	92.7
1986	525.0	275.6	67.7	343.3	3,803	90.3
1987	547.9	287.6	75.5	363.1	3,909	92.9
1988	473.1	248.3	120.1	368.4	4,108	89.7
1989	517.8	271.8	123.7	395.5	4,222	93.7
1990	543.7	285.0	141.1	426.1	4,339	98.2

Notes

a Based on 5% need, 15% postharvest loss, and 65% milling recovery rate.

Sources: From 1961-1975, data from Sierra Leone, Agricultural Sector Review, 1984; 1976-1990, data from Department of Agriculture and Forestry.

Table 3.4 Minimum Nominal Wage Levels of Selected Occupations, 1976-1986
(Leones per day)

YEAR OCCUPATION	1976	1980	1981	1982	1983	1984	1985	1986
AGRICULTURE								
Artisan I								
Artisan II	1.54	2.29	3.12	3.12	3.12	3.12	6.14	12.14
Labourers	1.34	2.09	2.92	2.92	2.92	2.92	5.94	11.94
Watchman	0.99	1.74	2.57	2.57	3.59	3.59	5.59	11.59
Clerical	0.99	1.74	2.57	2.57	2.57	2.57	5.59	11.59
	1.66	2.41	3.24	3.24	3.24	3.24	6.26	12.26
MANUFACTURI-NG AND INDUSTRIAL								
Artisan I								
Artisan II	2.03	3.48	3.55	4.26	4.26	5.98	8.85	11.34
Labourers	1.79	3.24	3.30	3.97	3.97	5.70	7.87	11.20
Watchman	1.36	2.82	2.86	3.43	3.43	4.97	7.01	9.57
Clerical (per	1.36	2.82	2.86	3.43	3.43	4.97	6.90	9.33
month)	48.44	87.48	89.10	113.40	115.6	139.92	-	302.4

Source: Longhurst, R. et al (1987), Structural Adjustment and Vulnerable Groups in Sierra Leone. (Report prepared for UNICEF). Table 3.6, p.35.

3.4 Early Impact of Economic Reforms

The implementation of macroeconomic policies under the reform programme has been particularly successful. The overall budget deficit was reduced from 12.0 percent of GDP in 1989/90 to 9.3 percent in 1991/92. Due to lower bank borrowing to finance the budget deficit, the rate of increase in money supply has slowed down considerably. The rate of inflation has declined sharply, from 115 percent in 1991 to 35 percent in 1992. Interest rates have fallen sharply in line with inflation, although positive in real terms. The exchange rate remained stable in the second half of 1992, while the differential between the commercial bank rate and the parallel rate narrowed to less than 5 percent. In real effective terms, the official exchange rate, which is calculated on the basis of the rate ruling in the commercial bank market, depreciated by 9 percent between the second quarter of 1990 when the market-determined exchange rate system was adopted, and the second quarter of 1992.

The implementation of the structural adjustment elements of the programme (Table 3.5) is also beginning to have an impact. Availability of essential products such as fuel and rice has improved significantly. This has contributed to the sharp slow-down in the rate of inflation. The shortage of foreign exchange in the official system has eased considerably and has reduced the premium on foreign exchange transactions. Liberalisation of prices and trade has resulted in significant increases in cash crop farmers' incomes. With the SLPMB now closed down, all coffee and cocoa exports are handled by the private traders who purchase these crops at any price from producers. This measure increased producers' price share to about 90 percent and 70 percent of f.o.b prices, respectively, as compared to less than 50 percent in the late 1980s. Price reform has thus raised producer prices and squeezed out

rents previously existing. However, it is not clear whether the recent increases in GDP is due to a redirection of resources from unproductive activities to productive uses following the reforms.

Table 3.5 Selected Indicators of Structural Adjustment

	1980/81	1984/85	1991/92
Real effective exchange rate: Index 1980=100	104	208	75
Ratio of parallel market to official exchange rate	0.93	3.02	1.17
SLPMB procurement price for cocoa as share of selling price (%)	101	21	90
Ratio of domestic gasoline price/ international price at parallel market exchange rate	--	0.74	2.13
Real interest rate:			
Short-term deposit rate (6 months) (%)	-13.4	-60.4	-22.9
Lending rate[a] (%)	-7.4	-51.4	-5.54
Broad money as share of GDP (%)	20.0	17.9	12.4
Major exports (1980/81=100)			
Diamonds (Carats)	100	100	78
Cocoa ('000 tons)	100	123	72
Coffee ('000 tons)	100	81	46

Notes

a- Average of lending rates charged by commercial banks

Sources: Bank of Sierra Leone and Central Statistics Office

Chapter 4

ANALYSIS OF THE RICE MARKET

4.1 Description of Structure and Distribution Channels

To implement price controls on subsidised imported rice, the government appointed public agencies to purchase and distribute the commodity. It was hoped that with a controlled distribution, the rice would be available to all sections of the population at the subsidised prices. During the late 1960s and late 1970s, the Rice Corporation was set up to handled the purchase and distribution of both domestic and imported rice. But in the absence of strict controls on sales of imported rice, and the inability by government to enforce controlled prices, the rice was resold in free markets at higher market prices. In this situation, those charged with the responsibility of distribution conferred the rice (and associated profits) to themselves or to others who paid them bribes. In cases where enforcement was perceived to be effective, hoarding or smuggling of the commodity to neighbouring countries was a common response thus pushing prices still higher.

In the next two sections, we describe the distribution methods that have been utilised for imported rice to highlight how public programs create vested interests in policies of social reform since the inception of price controls in Sierra Leone.

4.1.1 The Distribution Method of the Rice Corporation

Between 1965 and 1979, imported rice was handled exclusively by the Rice Corporation. In the absence of annual crop surveys and/or production forecasts, the corporation decided on the amount of imports by a simple guess of the expected shortfall in domestic production against domestic demand.

The imported rice was sold primarily to licensed wholesale itinerant agents at official wholesale prices. The wholesale merchants were expected to resell to retailers in urban areas at fixed retail prices determined by the Board. To ensure a wider distribution, the corporation also sold directly to retailers in urban areas from its stores in Freetown who resold to consumers in public markets in small volume measures such as the ten ounce butter container. The corporation similarly distributed the small proportion of domestic rice that it bought from local farmers. It was hoped that this method of sales would lead to a wider distribution that would guarantee consumers benefitted from the subsidised prices.

But once the rice left the corporation stores, they had no control over where and for what price it was traded. In most cases, it was retraded in a free market in urban areas at higher than market determined prices. For example, the results of an FAO Team survey on the retail prices in 1970 reported in GSL (1987) indicated that whereas the corporation had allowed agents in Freetown a profit margin of 7.5% after handling and transportation costs, the actual gross margin was 12.5%. The higher demand for agency appointments and the pressure for increased quota allocations by agents was a direct result of these high profit margins rather than to reflect a wider distribution. Thus, it appears that profit seeking or

rent seeking in an effort to secure subsidised commodities has been around since the inception of administered pricing in Sierra Leone.

The Rice Corporation was liquidated in April 1979 following administrative and financial difficulties. The government subsequently turned to another public agency to purchase and distribute imported rice - the Sierra Leone Product Marketing Board (SLPMB). The distribution methods used by SLPMB are discussed next.

4.1.2 The Distribution Method of the Sierra Leone Produce Marketing Board (SLPMB)

The SLPMB, in addition to the export monopsony it had for cash crops, replaced the Rice Corporation as the agency responsible for purchasing and distributing rice imports. It faced similar difficulties in distributing rice the rice and the rice never reached targeted groups. Like its predecessor before it, the Rice Corporation, the SLPMB initially appointed rice agents to sell rice throughout the country. It had about 400 agents with each receiving an allocation of 40 bags for every selling centre. Each agent was issued with a Rice Purchasing Authority (RPA) commonly known as a "Chit" from the Ministry of Trade and Industry which was then exchanged for the allocated quantities of rice from the SLPMB. The system was misused by many since most of the politically appointed agents did not have the required capital outlay to pay for the allocated quotas from SLPMB. Such agents were known to resell their RPAs for anything between Le50 to Le80 per bag in the mid-1980s. This method of distribution saw the rise of middlemen in rice distribution in huge numbers. The middlemen who got supplies from agents meant for rural areas diverted these to urban and mining centres where demand is high or smuggle the commodity into neighbouring countries

for hard currency. These distributional problems meant that rice could only be obtained by most consumers from the open market at higher prices. It was common to find entire members of a family queuing at official retail outlets to secure rice only to resell the same in the open market. Every individual subsequently became a rice dealer of some sort to secure high profits.

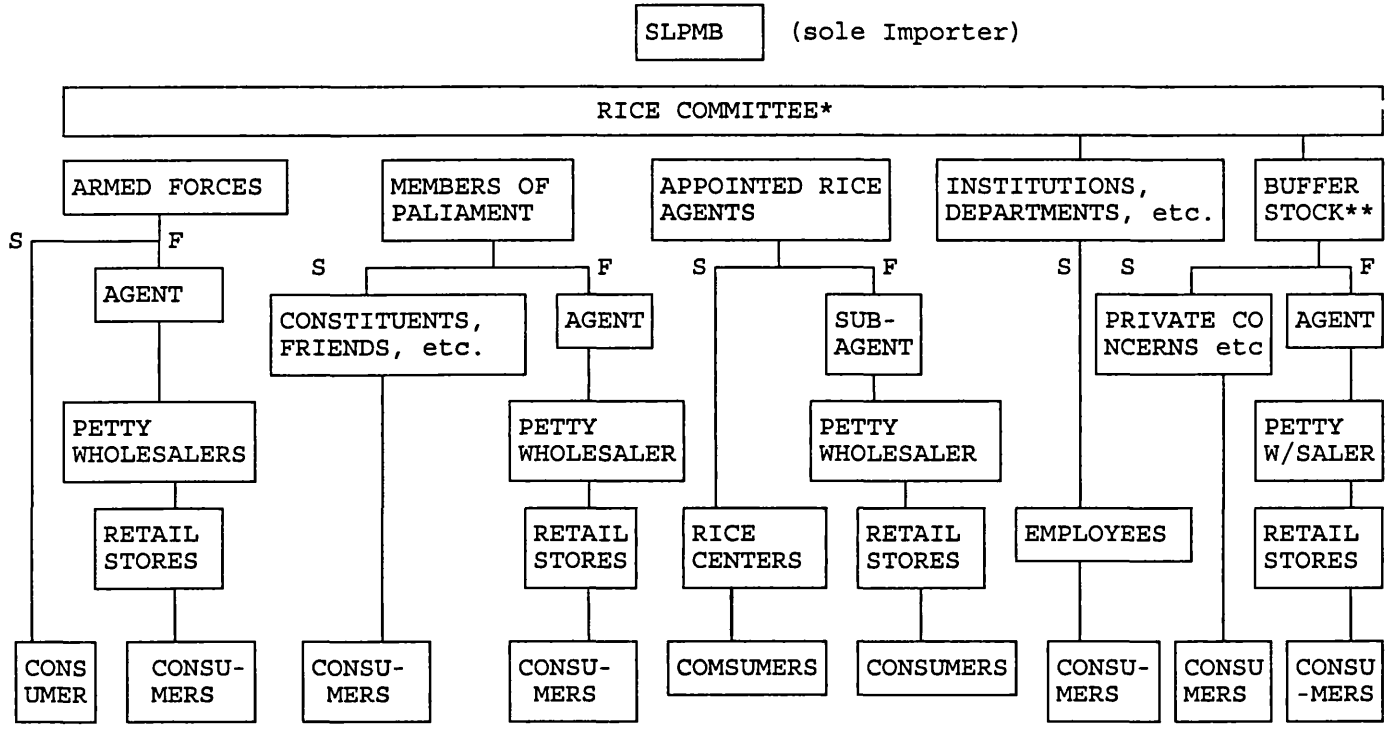
Given these problems with agents and to alleviate distribution difficulties, the Ministry of Trade and Industry in 1986 devised a new distribution mechanism to reflect a wider distribution in an attempt to shut off middlemen. In particular, the new mechanism was to include direct allocation to employees of all private and governmental organisations including provincial administrative regions. (See Table 4.1 and the diagrammatic illustration in Figure 4.1).

As Table 4.1 shows, monthly allocations of rice were issued not only to rice agents but also to institutions, ministries, etc. for their employees and buying agents of export produce.[9] In 1986, there were about 50 agents in the capital city Freetown alone with each receiving 50 bags daily for the various official retail centres which were later increased from 5 to 14. It was hoped that this system of distribution would eradicate middlemen and that the rice would now reach targeted groups. It turned out that the system led to an increasing number of middlemen in search of chits. As Figure 4.1 makes clear, only employees of private and governmental institutions were assured of an allocation at the official price that did not pass

[9]These allocations were decided by a Rice Committee comprising of President-Chairman, Ministers of Economic Ministries, Labour Officials, senior civil servants, Aid representatives, etc.

through a middleman. All other links in the distribution chain provided rents for middlemen and those who secured RPAs. For example, senior army personnel were known to receive huge quantities of rice monthly far in excess of their consumption needs. These surpluses found their way into the open market via middlemen. In the case of MPs, it was common practice for most to resell their chits to middlemen for their entire constituency quotas or a significant part thereof to supplement their low incomes. GSL (1987) estimated that the cost of rice to the final consumer was in excess of 64% above the subsidised price. Above all, and rather conspicuously, the allocations to the Armed Forces (a privileged group) was very heavily subsidised - they paid Le85/bag when official retail prices surged to between Le170-Le340/bag. This became a lucrative source of rents for rice dealers. All in all, it appears that whatever system of distribution that was devised, it only intensified rent-seeking activity for rice chits by middlemen. In the next section, we describe the nature of the transactions in each chain of the distribution mechanism illustrated in Figure 4.1:

FIG 4.1 Institutional Mechanisms for the Distribution of Imported Rice



KEY S - subsidised market
F - free market

Notes: *The President is Chairman of this committee
**Stocks reserved for shortfall and allocations by the President or his representatives

Table 4.1 **Allocations Approved by the Rice Committee, (1986) (50kg bags)**

Institution	May 1986	June 1986
Army	8160	8660
Police	7352	7352
Prisons	2600	2600
Mining Companies	6800	6800
Embassies etc.	1317	1317
Hospitals	1830	1830
Government ministries (Western Area)	13055	13055
Hotels	595	631
Industries	1796	1796
Banks	1490	1490
Government ministries (in Provinces)	3000	3000
Other institutions	9635	10348
SLPMB departments	14642	14500
Private concerns	4200	4200
Personnel of other Gov't institutions	3081	3081
Western Area agents	50395	50425
Provincial agents	52200	52200
"Standing Quotas"	9100	9100
TOTAL	191,248	192,355

Source: GSL (1987), "Rice Marketing and Pricing Policy in Sierra Leone", December 1987, pp. 69-70.

4.2 Nature of Transactions in the Distribution Process

Using the institutional mechanism described above for subsidised commodity, we now consider the nature of the competitive bidding in the "chit" system. But first, we emphasise that there is a free market for rice where individuals can buy or sell any number of units. In particular, the price of rice clears on the resale market. There are two implications given the existence of a free market:

(i) any individual can buy rice if he is willing to pay the higher market price, and

(ii) individuals with "chits" received a rent equal to the difference between the market clearing price and the official price plus the cost of the chit. But for such individuals, they may either choose to sell their chits and capture the rent in cash or they may consume the rent if they got the rice and consumed the commodity themselves. For example, whereas the official controlled price of rice in early 1986 was Le85 per bag, the free market price was Le270 per bag. Thus, the value of the rent from a controlled unit of rice was worth Le185 - the equivalent of about a month's

wages for low level government employees in that year. Given the extent of such profit margins, it is little wonder that there was intensive lobbying to secure "chits" from all sections of the population.[10]

We note, however, that the allocations awarded to institutions and departments was the only distribution that played a socially useful function - a low level of effort was required to secure these allocations. In all other cases, especially the allocations going to the politically favoured and rice agents in particular, it involved lobbying type activity that is socially wasteful.

In general, the nature of the transactions for all the flows into the free market were similar. The agents/middlemen who acquired the chits or rice from whatever source paid a premium per bag on the total units allocated. These in turn resold the chit for a higher premium above any costs incurred direct to petty wholesalers. The petty wholesalers would pay for the rice from SLPMB which they now sell to retailers, the final link in the chain before the rice reaches the consumer. The system was such that the chit or each unit of rice obtained secured a premium each time it changes hands at every stage. There was "rent sharing" between those who received the initial allocations and their subsidiaries. The consumers had to pay for all the additional premiums in the final price they were offered in the free market. Allocations to

---

[10]The incentives to engage in rent-seeking depends on the extent to which prevailing price do not reflect the scarcity value of goods and services as it happened in the case of rice

friends, constituents and those who received direct supplies were a means of building organized political support. These allocations did not normally involve cash transactions.

4.3 Rationing of Rice in the Controlled Sectors

Rent seeking in Sierra Leone is primarily a result of governmental controls in the goods market. The government controls the prices of several important categories of commodities such as rice, sugar, flour, kerosene, fuel, cement, building materials, etc. In general, the government subsidises consumption of these commodities by selling them to consumers at a lower price than that ruling in the free market mainly in large urban centres. The original purpose is to lower the cost of living and improve the quality of life of the poor in urban areas. However, the subsidy has benefited only the few individuals that received the subsidised commodities and others have to resort to the open market where the same goods can be obtained at higher cash prices. The differential premium between the lower cost subsidised goods and the higher free market cash prices has resulted in individuals expending resources to get government allocations of goods sold at the lower price with a substantial cost to society.

In the rice sector, rationing was by two methods:

(a) waiting in a queue at a controlled centre, and

(b) allocation to politicians who resell by issuing chits to their agents or preferred individuals.

Both methods involved the waste of resources through rent seeking - waiting costs or lobbying type activity. However, in addition to the rationed sectors, there was a free market for rice where supplies from the controlled sectors where diverted. In the free market, rice was resold at higher cash prices and there was no waiting.

The following sections discuss the rationing methods in rice allocation to show how individuals self-select themselves amongst the different sectors of the rice market. We also analyse the effects that price controls have on consumer welfare in the queue and compute the associated welfare costs of waiting in the different sectors of the market. But first, we consider the type of rent-seeking activity that was undertaken to get subsidised rice.

4.3.1 Type of Rent-Seeking Activity

The difference between the higher free market prices (what people will pay) and low official prices (what the rice actually costs) is rent to whoever got the subsidised rice. Such rents (and they where high during the period) can be expected to attract rent-

seeking behaviour. Individuals expended resources in the form of search, bribes and establishing contacts with politicians in an attempt to obtain rice or to increase the quantity that they got. Further, because of restriction on imports which limited supplies, excess demand for rice increased rent-seeking activity.

In India, overinstallation of capacity or excess labour hiring was associated with rent-seeking to get import licenses. However, in Sierra Leone, the more common method of competition is through waiting time (incurring time costs) either in line at a distribution centre or in a politician's office. For example, individuals with a low value of time stood in line longer, acquire more than their needs and resell the excess to individuals with a higher value of time. In the chit system, the right to benefit from the price differential is given to those allocated the chit. The need to acquire a chit, given its huge associated profits, encouraged individuals to devote large amounts of resources in waiting time in the offices of those who issue them. But since the chits were freely exchangeable for cash, the rich paid for these from those who got them by waiting at a price at least as high as the owners are willing to accept. But the costs of waiting in either sector are resources spent in the pursuit of a rent from rice allocation whose price is controlled by the government. These resources are a social loss since they do not result in additional output to society. The costs of rent seeking through search (waiting time costs) is therefore a real resource cost to the whole economy.

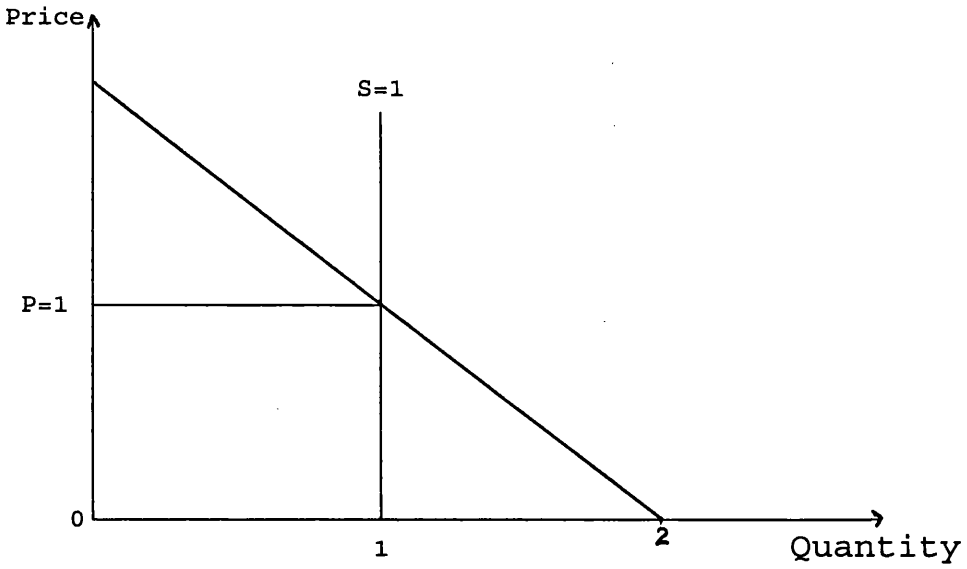
In the next section, we show the equilibrium configuration in the rice market in the absence of government controls in prices and supplies. We then show how controls affect the equilibrium configuration, especially the free market price of imported rice.

4.4 Model of Consumer Behaviour With Rationing

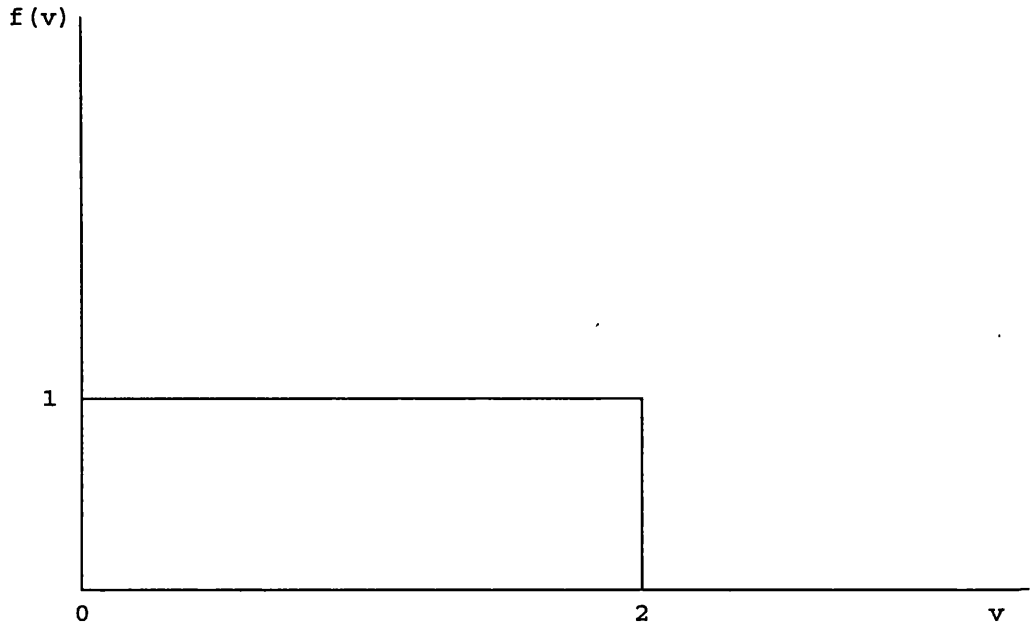
4.4.1 Free Market With No Government Intervention

Suppose that the supply of rice is fixed at unit quantity. If there was no government intervention in the rice market (in terms of fixing prices), the supply and demand for rice in the free market is illustrated below:

Figure 4.2 Free Market Equilibrium With No Intervention



With market-clearing prices, the price is set at price P = 1 such that the unit is sold if one consumer demands the good. Using the free market equilibrium, the consumer's valuation, v, (in terms of the cost of willingness to pay for the good) can be shown to be distributed between 0 and 2 as illustrated in the diagram below:



We see (from Figure 4.2) that the consumer is willing to pay up to Le2 per unit for rice but is only paying Le1 per unit (actual cost). The difference is his consumer surplus. But the government intervenes in the rice market and lowers the price P to Ps (the official or subsidised price). Since government imports are less than demand, there is excess demand for rice which causes shortages and necessitates the use of allocation schemes other than by cash payment.

In the following sections, we discuss the two rationing schemes that have been utilised in the rice market in Sierra Leone. Since rice was also sold in a free market, for ease of exposition, we analyse the different cases as:

(a) queue and free market only with no politician,

(b) queue and free market with a politician.

In (a) we consider rationing in the queue and exclude the chit system. Subsequently, we introduce the chit system and exclude supplies already gone to the queue.

4.4.2 Rationing in Queue With No Politician

Suppose that the only official source of obtaining rice is from official rice agents in distribution centres or from the free market. We continue to assume that the supply is fixed at Q = 1 and controlled by the government.

We make the following additional simplifying assumptions:

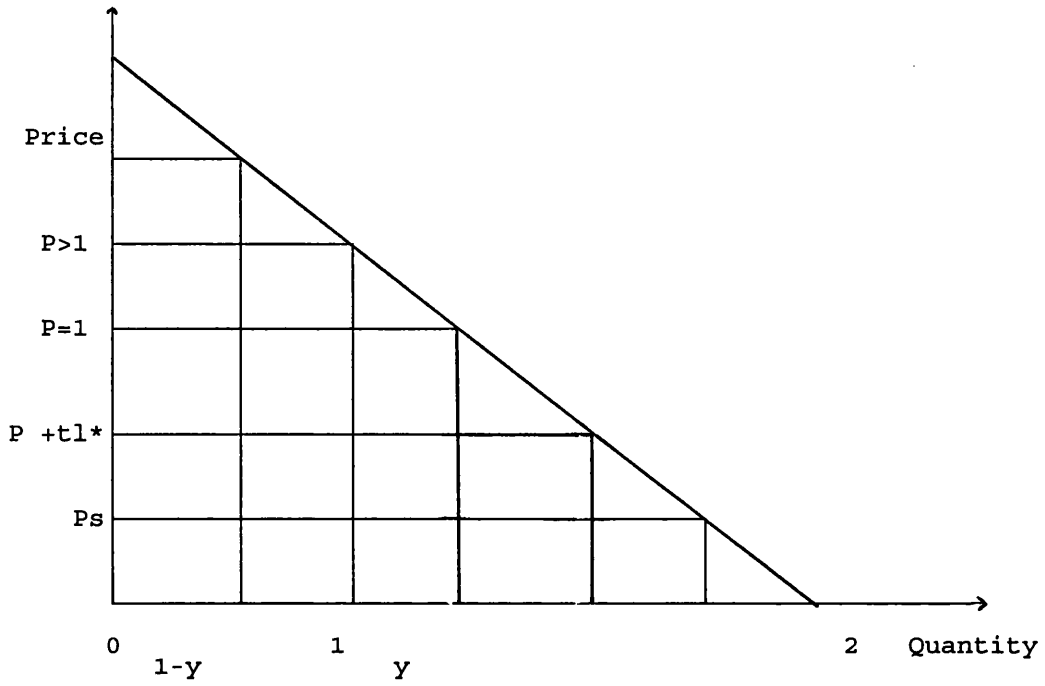
(i) the free market operates costlessly alongside the official market with uniform prices, P, for all consumers. That is, there are no queues, search costs or penalties for dealing in the free market;

(ii) there are two groups of consumers - the rich and the poor with a different valuation v, for a unit of rice.

Let y units be the volume of rice sold in the official controlled centres.[11] Since purchasing from the queue involved waiting, assume that l is the average queue time necessary to obtain supplies. The government fixes l so as to determine the "slowness" of distribution so as to achieve zero rationing. That is, the slowness of distribution ensures that supplies in the queue are exhausted by the last person in line.

[11]In the controlled queues, consumers make limited purchases per visit in units of butter cups or 5kg packs. Hence, y is the total number of 5kg packs (for example) sold in the queue.

Figure 4.3 Free Market Equilibrium With Queue



The diagram shows that despite the lower subsidised price paid, waiting costs increase the total price to $P_s + tl^*$ where t is the opportunity cost of the last (yth) person who bought from the queue. In the new free market, the price is now higher than the free market price without intervention.

4.4.3 Consumer Welfare in the Queue

We have shown that because of the low cash price and the costs of waiting, the individuals who go to the queue are the poor with lower opportunity costs of time, t. The remaining consumers with a higher t and, therefore v, went to the free market because they are, by assumption, willing to pay higher cash prices. We now show the effects of price controls on consumer surplus for both sets of consumers - in the queue and free market.

Further, let one unit of queuing time cost t, where t is the opportunity cost of waiting time. The opportunity costs of time is lower for the poor than the rich because the poor have a lower (implicit/explicit) hourly wage rate. We assume t and v are perfectly positively correlated so that the poor with a lower t have a lower v. One special interesting case we analyse below is t=v with t having the same distribution as v shown above.

The government by choice of Ps and l achieves queue equilibrium such that

$$P_S + t\, l^* = v \qquad [4.1]$$

where the left hand side of [4.1] is the marginal cost of the last unit of rice sold in the queue and the right hand side is the marginal benefits of the last unit sold in the queue.

Given t and l^*, an individual will join the queue if the subsidised price is fixed such that the marginal costs of acquiring rice is less than or equal to the marginal benefit. For example, if queuing time is fixed at unity, since v=t, an individual will not join the queue if $P_s > 0$ since then all his surplus is exhausted in the queue.[12] In general, since t=v, consumers with a lower v form the queue and the remaining consumers with a higher v and therefore t go immediately to the free market. Hence, the government by choice of P_s and l^* allocate quantities in the queue such that poor consumers get the ration. The remaining supply for the free market (= 1-y) is sold at a new free market price (P > 1) higher than the market price without intervention. The new free market equilibrium with a queue is illustrated in the diagram below:

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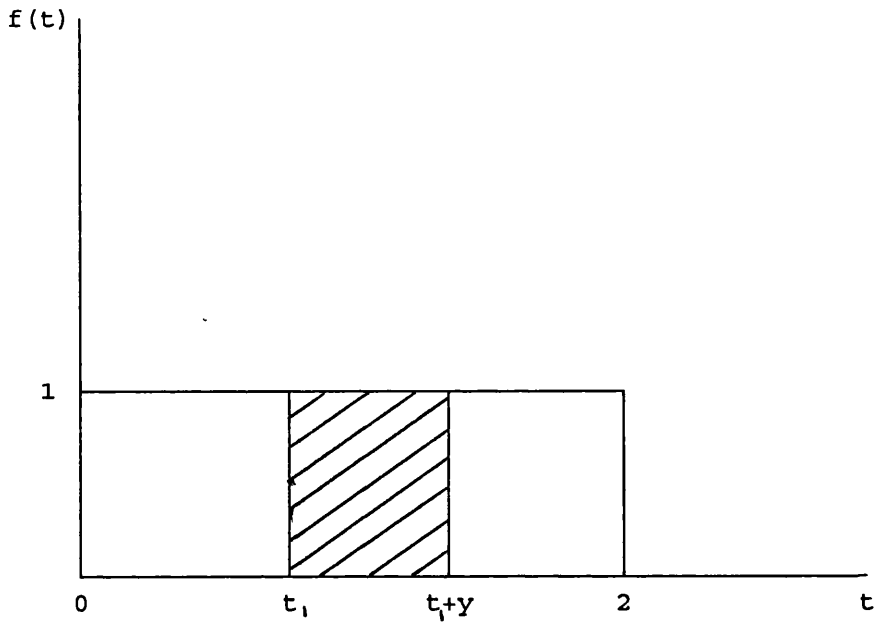
[12]For unit queuing time, he will join the queue only if Ps = 0. Therefore, we require that $l' < 1$ since for $l' < 1$ and t, the highest value of Ps then determines the individual's decision to join the queue.

Given that y units are sold in the queue, it implies that y individuals benefitted from these supplies. Suppose that the opportunity costs of time of these individuals lie between t_1 and t_2 where t_2 is the opportunity costs of time of the last (yth) person in the queue. The distribution of the opportunity costs of time for these individuals is shown below:



The shaded area in the diagram above is the total costs of waiting in queue equilibrium. Hence, if the poorest individual has opportunity costs of waiting $t = t_1$, the corresponding costs for the last (yth) person[13] is

$$t_2 = t_1 + y$$

[13]Since Ps is positive, we have excluded unemployed individuals with t = 0. Thus, only individuals with positive but low values of t benefitted from subsidies in the queue.

To determine which individuals form the queue, we need to compute the surplus of the poorest and the last (yth) person. The surplus is defined as the marginal valuation minus total cash costs (cash price plus opportunity costs of time). In general, an individual joins the queue, if his surplus is zero or positive, that is, if his marginal valuation of rice is equal to or greater than the total marginal costs of rice. To illustrate, first calculate the surplus of the poorest person with lowest $t = t_1$ in the queue with demand for rice at an infinitesimally small but positive quantities. For this individual,

$$v = p_s + t_1 l^*$$

defines his t_1 such that, since $v = t$ by assumption,

$$t_1 = P_s + t_1 l^*$$

with solution[14]

$$t_1 = \frac{P_s}{(1 - l^*)} \qquad [4.2]$$

The surplus for the poorest individual, being the marginal person with $v = t_1$, is by definition zero.

For the last (yth) person with opportunity cost t_2, his surplus is

$$s = v - P_s - t_2 l^*$$

But $v = t = t_1 + y$ and, therefore

$$s = (t_1 + y) - P_s - (t_1 + y) l^*$$

[14]Queuing time must be less than unity, otherwise the solution is undefined.

Using P_s above, we have that

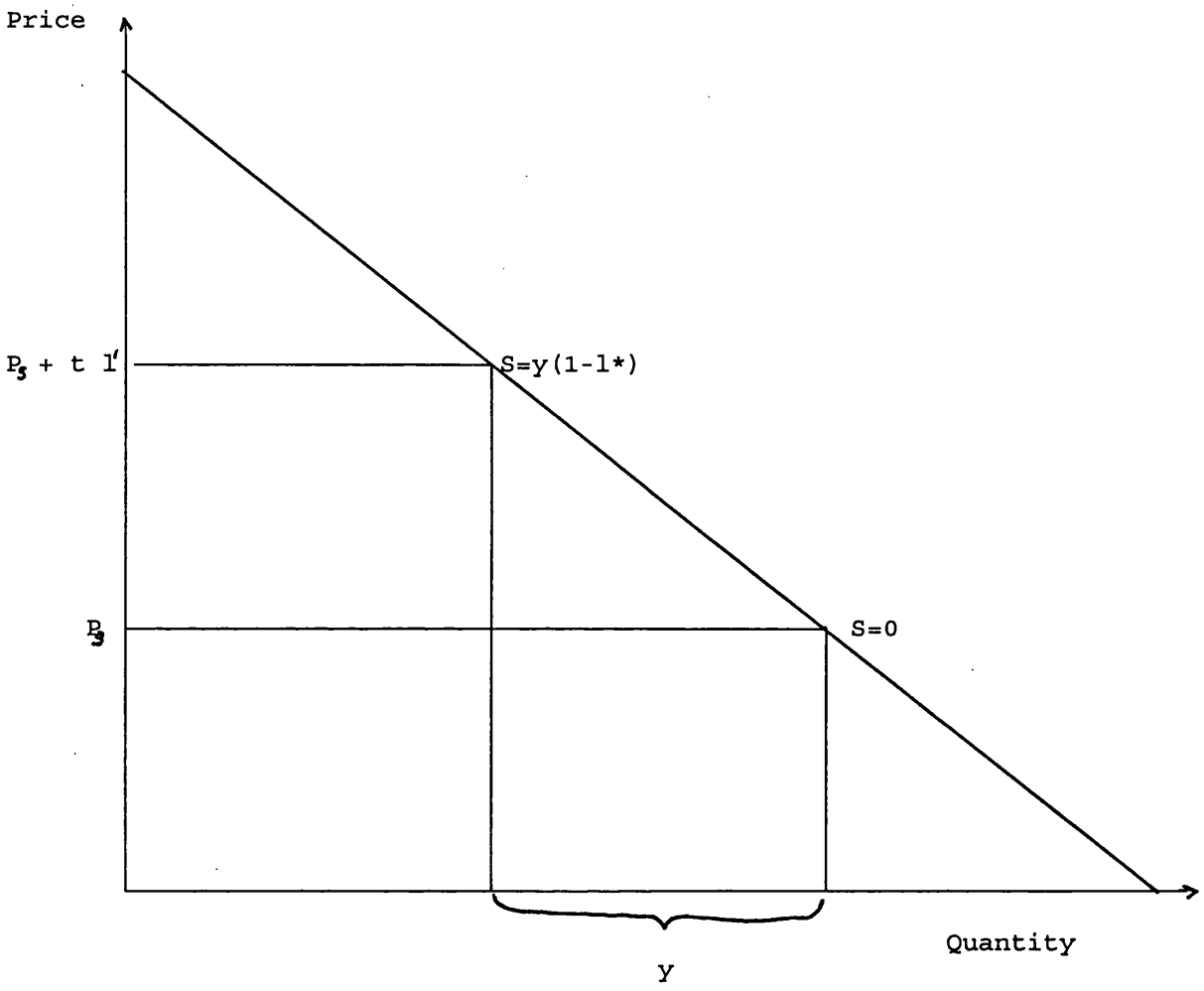
$$s(y) = y(1 - l^*) \qquad [4.3]$$

Hence, welfare of this bottom group (shown as shaded area in Figure 4.4 below) is

$$w_1 = \int_{y=0}^{y=y} s(y)\,dy = \int_0^y y(1 - l^*)\,dy = \frac{[y^2(1 - l^*)]}{2} \qquad [4.4]$$

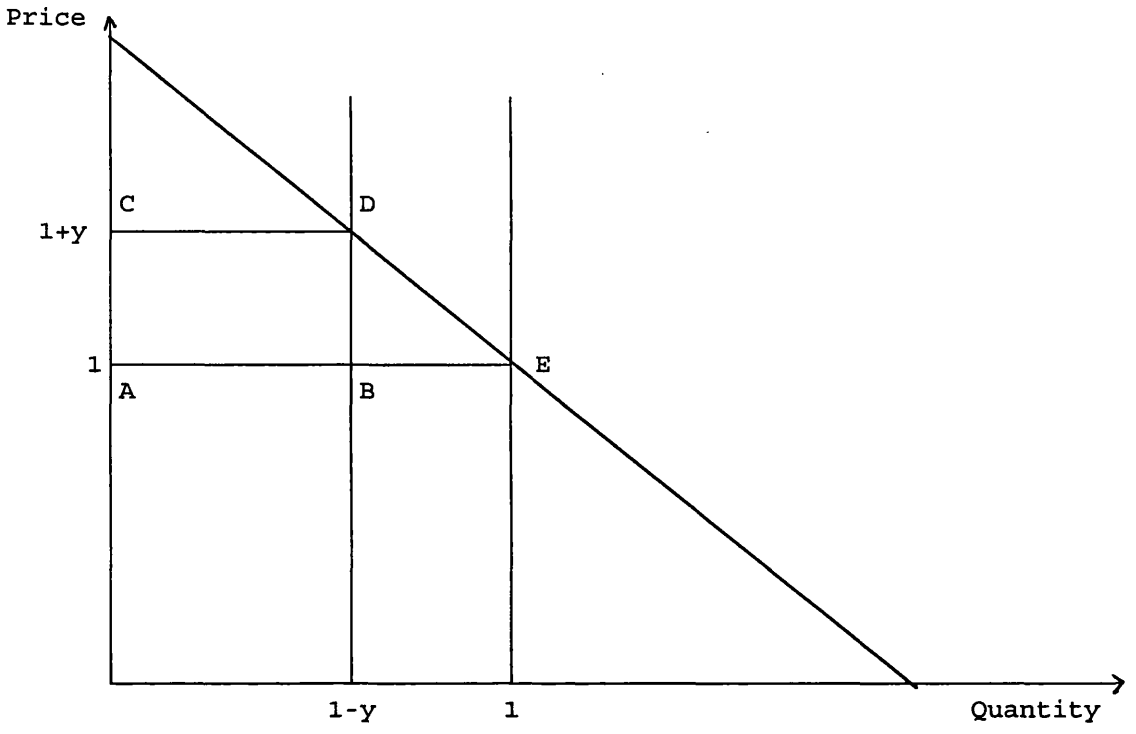
$$[\text{ check: } \frac{dw_1}{dy} = y(1-l^*)]$$

Figure 4.4 **Consumer Surplus for the Poorest Group**



Similarly, we can calculate the welfare loss of the rich gone to the new free market and paid higher cash prices. This is shown as the shaded area in Figure 4.5 below:

Figure 4.5 Consumer Surplus for the Rich



The welfare loss in this case is made up of the loss in consumer surplus due to the higher price and the additional revenue for gone. Hence, the area of the trapezoid ABEDC is the total welfare loss computed as follows:

Welfare loss W_2 = area of trapezoid ABEDC

= area of rectangle ABDC + area of triangle BDE

$= y(1-y) + y^2/2$

$= y - y^2/2$ [4.5]

Hence, for given P_s and l^*, the benefit to consumers in queue with free market is the sum of the welfare change given by

$$\sum W = \frac{y^2}{2(1-l^*)} - [y - \frac{y^2}{2}]$$

$$= y^2(1 - \frac{l^*}{2}) - y \qquad [4.6]$$

In the expression for the sum of welfare change, the first term refers to the gains of the poor, and the second to the losses of the rich.

4.4.3a Model Drawback

We have assumed in the above analysis the unrealistic but simple case of $t=v$ for ease of exposition. The more realistic case is $t < v$ but t and v still positively correlated. For example in Equation [4.1], if fix queuing time to be unity, then $t < v$. This case has not been analysed here since we do not believe it will affect the basic results we have obtained here. It may, for example, increase the surplus of individuals for given t values.

4.4.4 Rationing in Queue with Politician

Suppose that in addition to sales in the queue, the government also allocates rice by issuing quotas to politicians. The original intention was to increase the spread of distribution to ensure that the rice subsidy reached more targeted groups of consumers. But given the benefits that accrued to those who got subsidised rice, the politicians realised that a rent was being offered them and they used it for their personal benefit. They either appropriated the rent themselves by reselling the entire quota in the free market or confer it upon others by giving them rations of the supplies (by issuing chits) received at the lower subsidised price for politicians. In the latter case, the politicians rewarded faithful supporters or friends by providing them privileged access to subsidised rice.

In general, the politicians resold the quota awarded them by charging a cash premium per bag of rice over and above the subsidised cost they paid. Those who got the chits (at the higher cash price) resold the same or the rice thereof at the higher free market price. In these circumstances, a chit became a valuable commodity since it provided a windfall to the

owner who bought rice at the lower cash price. Such windfall gains generated rent-seeking activity with individuals willing to devote a high level of effort (incurring time costs) in search of a chit from politicians. Compared to the queue, however, there was lesser waiting time at the politician since a lower number of consumers visited him due to a higher cash price which is above the government-subsidised price to consumers. To analyse the model in the case of the politician, consider the following scenario:

Suppose one politician has one bag offered for sale at price defined as:

$$P_K = P'_s + K \qquad [4.7]$$

where P_K is the price charged by the politician

P'_s is the purchase price of the politician (set by government lower than P_s), and K is the cash premium per unit sold.

Depending on the politician's objective(s) in appropriating the rent, he may face one of two types of constraints in fixing P_K:

(a) Revenue Maximisation (hard upper bound).

In this case, he wishes to maximise his personal gain and he, therefore, confers the benefit of the entire allocation to himself. Revenue is maximised by charging $P_K = P$, the free market price. Hence, his entire quota allocation is diverted to the free market.

(b) Political Patronage (soft upper bound)

Suppose that in order to build political support, he shares the benefits of the quota allocation between himself and others. To be successful, he charges a K and therefore P_K such that

$$P_K < P.$$

That is, he allows his supporters a windfall gain for political returns.[15] Individuals will therefore visit a politician and incur waiting costs because of the expected benefit of the visit.

The politician's choice of P_K (compared to P) determines the number of consumers who visit him. For example, if (a) above is true, all remaining consumers less those gone to the queue go to the free market and pay higher cash prices where there is no waiting. Whereas, if (b) is applicable, some of the remaining consumers visit the politician because of the expected benefit of the visit.[16]

Suppose that it takes one unit of time cost t to search one politician. Let N consumers join the politician's queue and, since he has one bag offered, only one consumer is lucky. There is therefore a risk involved in joining the politician's queue the likelihood of being unsuccessful. We assume a uniform probability of success.

Let t' be the opportunity cost of the last (Nth) person in the politician's queue. Since those

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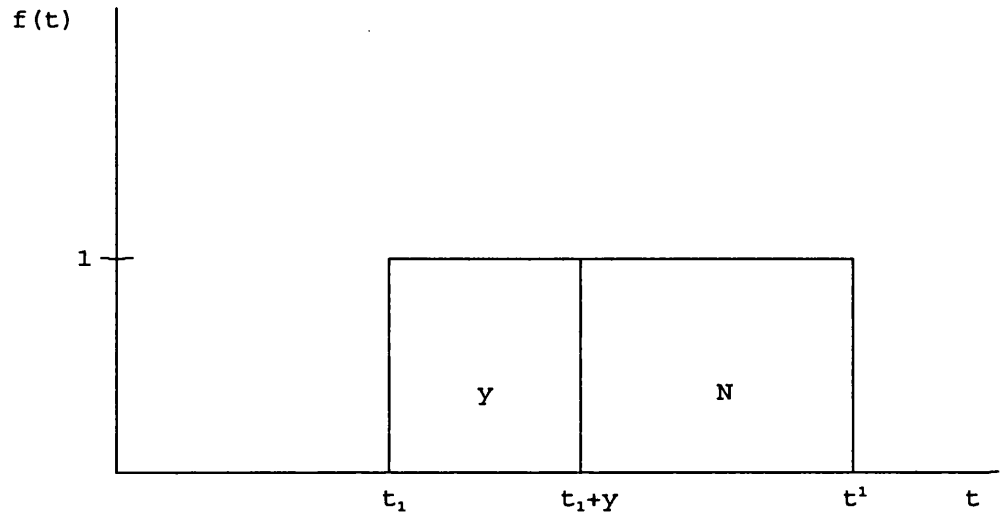
[15]The politician's objective(s) are not modelled here. However, we believe that case (b) is the more interesting for the analysis here.

[16]These are likely to be consumers with a t value between poor and rich including those gone to the queue.

gone to the politician's queue are individuals between poor and rich, their corresponding opportunity costs of time (whose distribution is shown below) will lie between $t_1 + y$ and t'.



Where the shaded area is the total cost of waiting in the politician's queue.

Therefore, the opportunity cost of the last (Nth) person in politician's queue is

$t' = t_1 + y + N$.

Using this diagram, consider an individual with $t = t_1 + y$. We ask whether this individual prefer the gamble of one unit of time, costs t, for the probability 1/N of gain ($= P - P_K$)? Similarly, for an individual with $t = t'$, does he prefer the gamble (or is he indifferent) to the free market?

If individuals with t' join politician's queue, those with $t_1 + y$ go immediately to that queue. For individuals with t', the choice between the politician's queue or the free market will depend on whether

$$t' < > (P - P_K)/N \qquad [4.8]$$

But $v = (P - P_K)/N$ defines t' and, since $v = t = t'$, this

implies that

$$t' = (P - P_K)/N \qquad [4.9]$$

Equation [4.9] shows that individuals with $t = t'$ are indifferent between the free market and the politician's queue if the cost of visit (t') is equal to the expected benefit of the visit [$(P - P_K)/N$].

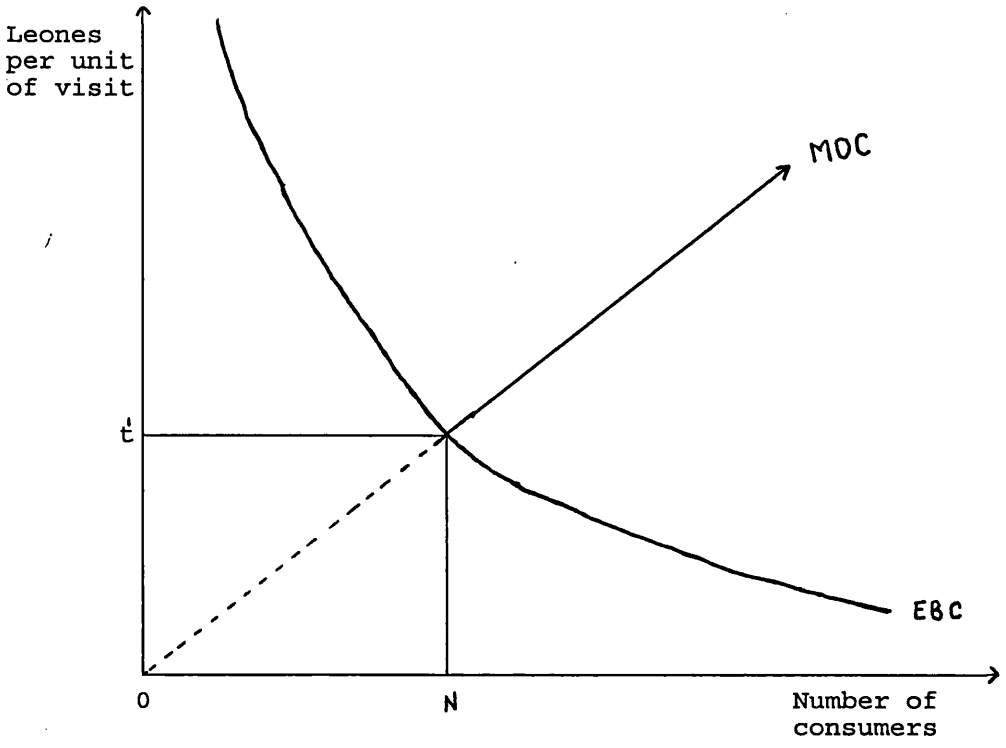
Using $t' = t_1 + y + N$ and rewriting Equation [4.9], we have that

$$t_1 + y + N = (P - P_K)/N \qquad [4.9a]$$

This defines N (the number of consumers gone to the politician's queue) as a function of P_K (the politician's price) given $t_1 + y$ where $t_1 = P_s/(1 - l')$. (See Equation 4.2.)

The equilibrium configuration of the costs and benefits of the visit to politician which determines N, are illustrated diagrammatically in Figure 4.6.

Figure 4.6 Costs nd Benefits of Visit to Politician



MOC is the opportunity cost curve of visit which is a monotonically increasing function in t but is assumed linear here for simplicity, and EBC is the expected benefit curve of visit, a rectangular hyperbola defined as EBC = $(P - P_K)/N$.

Using Figure 4.6, we can analyse the effects of variations in P_K on N holding P and t′ fixed by a simple comparative static exercise. For example, an increase in, P_K reduces expected benefit from visit and shifts the EBC curve down and to the left. With fixed t′, the effect is a fall in the number of consumers that visit. Similarly, a decrease in P_K increases expected benefit from visit and shifts the EBC curve up and to right. With the fixed t′, it leads to a rise in the number of consumers that visit. Hence, in this case, richer consumers too will go to the politician since the benefit of the visit is now higher.

The analysis shows that consumers with $t < t'$ visit the politician since the expected gain exceed the cost of the visit. Therefore, the remaining consumers with value of $t \geq t'$ go immediately to free market since their high t values make it worthwhile to visit the free market and pay higher cash prices.

4.4.4a Model Qualification

In the above analysis, we have assumed a uniform probability of success for individuals in politician's queue. This, again, is not very realistic since it was known that individuals increased the certainty of getting supplies from the politician by offering higher k values. Assuming non-uniform probabilities of success complicates the analysis and do not affect the basic results here.

4.4.5 Costs of Queuing in Controlled Sectors

In the official queue, y individuals make one visit costs t. Therefore, the welfare costs of queuing in this sector which is part of W_1 (Equation 4.4) is

$$C_1 = \int_{t_1}^{t_1+y} t\, l'\, dt$$

Similarly, in the politician's queue, N individuals make one visit costs t. The welfare costs of queuing in this sector is

$$C_2 = \int_{t_1+y}^{t_1+y+N} t\,dt \qquad [4.11]$$

We can see that C_1 and C_2 are both functions of the number of rent seekers and the opportunity costs of time of individuals in the different sectors. Therefore $C_1 + C_2$ gives the total welfare costs of labour time used by rent seeking individuals. This is an approximation of the total amount of resources lost in unproductive activity and is therefore, a measure of the social costs of the activity to the economy.

If information on the variables in C_1 and C_2 were available, it would be interesting to compare the total value of rents to the costs of waiting in each sector. Such comparison would indicate the extent to which the rent is dissipated during the period. Unfortunately, data on this type of activity is not recorded but, given the large numbers of individuals engaged in this activity, it is possible that the welfare costs of queuing may equal or even exceed the total value of the rents.

Chapter 5

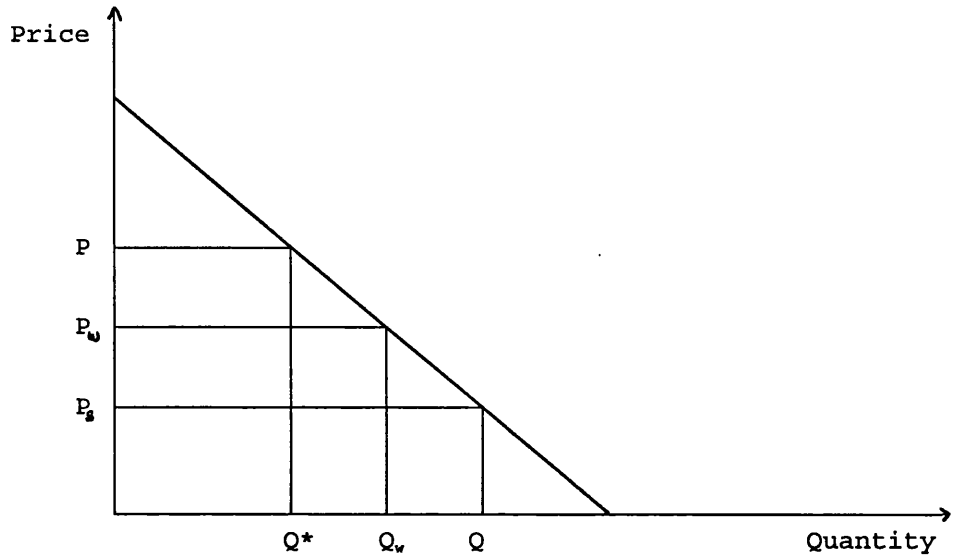
METHODOLOGY AND EMPIRICAL ESTIMATES OF THE COSTS OF RENT SEEKING

5.1 Rent-Seeking Costs in the Rice Market

We have argued that price controls were extensive in Sierra Leone during the period under consideration. For empirical evidence on rent seeking costs, we focus on rice imports since this was the main source of rent seeking in the economy during the period.

The subsidy on imported rice offered potential benefits to those that got access to the commodity. The resources devoted to acquiring these rents must be counted as part of the deadweight loss due to price controls. Figure 5.1 below illustrates the extent of rent seeking costs from rice imports:

Figure 5.1 Rent-Seeking Costs from Rice Imports



Assuming that DD represents domestic demand for rice, the government buys rice imports at world price P_w and resell each unit at a subsidised price (P_s) below the free market price (P). But since imports (Q') are less than domestic demand (Q) at the subsidised price (P_s), this results in domestic excess demand for imported rice. In a situation of scarcity, the right to the rent on rice imports is not guaranteed. The demand curve shows that consumers are willing to pay a price up to P per unit of import but the actual cost is only P_s. They therefore spend resources up to ($P - P_s$) or ($P - P_w$) per unit of import to capture the rent or if use of such resources guarantees receipt of the government subsidised rice.

We have also indicated that the type of rent seeking activity for rice imports is an investment in time, money and any effort to secure any allocation of rice at the subsidised price. Time involved is long hours of wait in queues both at a controlled centre or at a politician's office.

The costs of waiting in queues or offices reduces the rent to recipients and such costs are wasted resources devoted to the rent seeking activity[17].

5.2 The Size of the Costs of Rent Seeking

Krueger (1974) approximated the annual welfare costs of rent seeking induced by a system of price and quantity controls by the annual value of rents. In terms of the analysis here, the total rents to be captured from rent seeking in rice imports is given by:

$$R = r\,Q^* \qquad [5.1]$$

Where $r = P - P_s$ is the rent per unit,

$Q^* =$ annual volume of rice imports

and $R =$ total annual value of rents

Thus, each unit of rice imports confer upon the owner a rent per unit given by the difference between the subsidised price and the free market price. As in Mohammad and Whalley (1984) and Ampofo-Tuffour et al (1991), we assume that for the politician, rice imports attract a premium of 100%. Given the similarities of the institutional structures and economies of these countries, the rent-seeking activity is similar and thus introducing similar assumptions in the calculations of rents here is not unreasonable. Further, apart from the existence of an active free market in foreign exchange during the period which encouraged

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[17]Gallagher (1991) and Varian (1991) refer to these costs as direct or transaction costs of rent seeking.

the smuggling of rice across to neighbouring countries, this and the hoarding of the commodity resulted in scarcity which pushed up prices still higher. Thus, a 100% premium is a reasonable guesstimate of the rent from rice imports.

Obviously, in an ideal world, the best estimate of the welfare costs of rent seeking could be calculated using the formulae derived in Section 4.4.5. We can then compare the total rents to the real costs incurred in the unproductive activity to determine the extent of rent dissipation. Given that hiring of others to wait in line or some identification (eg. buckets, stones, etc.) was undertaken in queues, and since only some rent seekers were successful with a politician, it is possible that the costs of rent seeking exceeded the value of the rents[18].

5.3 Empirical Estimates and Results

There are no recorded data on rent-seeking activities in Sierra Leone. Further, it is difficult to obtain correct data on price series and volume of sales for imported commodities, including rice. For a snapshot figure of the costs of rent-seeking in rice distribution in Sierra Leone, we have used the limited information reported in various studies (eg. Longhurst, R et al (1986), and GSL (1987)) and other synthetic data. In the absence of data to compute the welfare costs of rent seeking a second best guess - the annual value of rents has been estimated.

For an indirect test of rent-seeking, the annual value of rents on rice imports for 1986 are

[18]In Deacon and Sonstelie (1989), the hiring of others to wait in line for supplies dissipated the rents.

calculated using the following procedure:

1. The period is divided into two for the given year to reflect the increase in prices of imported goods (including rice) in the second half of that year due to the pursuance of a shadow IMF adjustment programme by the Government.

2. Data on the volume of rice sales in the second half of the year are reported in Longhurst, R. et al (1987). Using the figure for rice imports for the year, the sales in the first half of the year are obtained as the difference between these two figures.

3. Data reported in GSL (1987) (Table 4.1) indicate that during the months of may and June 1986, rice agents and politicians received 53% and 40%, respectively, of the total supplies. We assume constant shares over the period to estimate the volume of sales in each sector for both periods.

4. In the politician's queue, the rents have been computed by assuming that the politician resold his entire quota of through his agents or others who visited him at a premium of 100.0 percent in excess of his subsidised price for political patronage.

5. Food aid and supplies to institutions (about 7%) is excluded in computing the total rents since securing supplies from these sources required a low level of effort. For food aid, the donors insisted on the rice being sold at market determined prices with penalties for breach

of this regulation[19]. In the case of supplies to institutions, government departments, etc., these played a socially useful role and did not generate any rent-seeking activity.

6. Finally, since rents are a realised financial gain irrespective of whether the rice is consumed or not, total rents are computed for all sales in the official and politician's queue excluding supplies to institutions and food aid sales referred to in note 5 above.
The results (summarised in Table 5.1) show that:

i) total rent-seeking costs in the rice market alone amounted to 5.3 % of GDP in 1986. Compared to other results in rent-seeking costs as a percentage of GDP, our estimates are similar;

ii) further, in the absence of data on cross-border resale and other similar flows, our estimates are biased downwards.

[19]The United States Government suspended food aid to Sierra Leone when the stipulated conditions for sale were violated.

Table 5.1 Data Base to Calculate Total Rents in the Rice Market, 1986

Variable	Period		Totals
	Jan - Jun	Jul - Dec	
1. Rice Prices[a] (Le/50Kg Bag)			
Queue (P_s)	80	170	
Politician (P^1_s)	55	110	
Politician's Price (P_k)	110	220	
Free Market Price (P)	270	500	
2. Rent per Unit (Le)			
Queue ($P - P_s$)	190	330	
Politician ($P_k - P^1_s$)	55	110	
Politician's Queue ($P - P_k$)	160	280	
3. Total Sales[b] (50 Kg Bags)	986,168	813,832	1,800,000
4. Sales in line (50Kg Bags)			
Queue (53%)	522,669	431,331	954,000
Politician's Queue (40%)	394,467	325,533	720,000
5. Rents ('000' Le) Queue	99,307.1	142,339.2	241,646.3
Politician's Queue	63,114.7	91,149.2	154,263.9
Total Rents	163,421.8	233,488.5	395,910.3
6. Rents/GDP[c] (%)			5.3

Notes:

a All prices are average for the period and observed in Freetown except Pk which is calculated assuming a premium of 100.0 % on P's. These prices may be compared with average import prices of US$16.4 and 11.3 for the two periods, respectively.

b Total sales equal total imports of 90,000 metric tons in 1986 (1 Mt = 20 * (50kg) bags).

c Total GDP in 1986 is 7,481.3 million leones.

Sources

1 Author's calculations

2 Data on rice sales and prices from

a) Longhurst, R. et al (1987),

b) Government of Sierra Leone, 1987.

Table 5.2 Results in Rent-Seeking Costs as Percentage of GDP

AUTHOR	COUNTRY	YEAR	CATEGORY	RENT SEEKING COSTS AS % OF GDP
Krueger(1974)	India	1964	Import Licences	7
Mohammad and Whalley (1984)	India	1980/81	Import Licenses	3.8
Ampoto-Tuffour et al (1991)	Ghana	1984	Foreign Exchange	6.5
Koroma (1994)	Sierra Leone	1986	Rice Imports	5.3

Chapter 6

REGULATION AND PRODUCER RESPONSE IN THE EXPORT SECTOR

6.1 Objectives of Market Intervention

We have argued that up to the early 1980's, the government intervened in the export crop sector by paying consistently lower prices to export farmers.[20] Lower domestic producer prices have resulted in lower purchases from farmers by the marketing agency. The reason is that farmers have responded by realigning their market activities to reflect incentive distortions. In this particular case, they have engaged in illegal sales abroad across the country's immediate borders where they received revenue in convertible currency.[21] Such illegal sales have resulted in loss of domestic revenue and foreign exchange earnings by the government.

The objectives of price intervention by the marketing agency on behalf of the government includes inter alia:

(a) to increase the stability of domestic prices;

(b) to maximise foreign exchange earnings, and

(c) to generate revenue to invest in agricultural development and basic infrastructure.

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[20]The marketing arrangements for export crops are discussed in an earlier section.

[21]The significant discrepancies between agricultural production figures and the marketing agency purchases suggest the existence of illegal trade in export crops.

In the late 1960's and 1970's in particular, the government's agricultural export price policy has transferred wealth away from agricultural producers through tax stabilisation. They have depressed agricultural domestic prices through a tax wedge and have used the resulting revenue to subsidise imports for urban consumers against the interests of farmers. In the early 1980's, with declining purchases and foreign exchange earnings, the government increased producer prices substantially and revised the exchange rate to reflect the falling value of the currency. This resulted in modest increases in output of export crops and consequently on the purchases by the agency.

The next section analyses a short run theoretical model of the production decisions of a representative export farmer engaged in both illegal trade as well as official sales to the marketing agency. In the case of illegal sales, he risks being caught and punished in terms of seizures or fines or both. The farmer reduces the probability of apprehension by incurring additional costs in the form of bribes to officials responsible for preventing such illegal trade. The model is tested using data for coffee for the period 1964 - 1982.

6.2 Model of Output Choice With Smuggling

The farmer faces a simultaneous decision on the amount of exportable output to produce and the disposal of that output between official and illegal channels.

To model the farmer's choice decision, we make the following simplifying assumptions:

(i) that the farmer's decision regarding the amount of illegal sales play a dominant role in the output decision;

(ii) that the illegal market is served first and the residual output is sold in the official market;

(iii) that the farmer can produce output profitably at the given official producer price;

(iv) that in the short run, given the nature of the crop, substitutability is impossible and output can be changed only by varying farming intensity given the stock of existing trees; and

(v) finally, the farmer faces an uncertain border price for its crop in the neighbouring country.

Suppose that X is the total exportable output to be produced and disposed of through the two channels. We write X as an identity given by

$$X \equiv X_o + X_p \qquad [6.1]$$

is output sold in the official market at price, P_o , and

X_p is output sold in illegal channels at parallel price, P_p.

Following Bhagwati and Hansen (1973), assume that illegal trade to neighbouring countries takes place through illegal channels. While such smuggling trade increases the farmer's revenues, the costs of smuggling (bribes, fines, etc.) pushes up his marketing costs. As is frequently assumed in the literature (Bhagwati and Hansen (1973) and Devarajan et al (1989)), the penalty incurred depends on the actual amount of illegal quantities sold (Pitt, 1981) analyse the case of Indonesian exporters who reduce the risk of being caught by increasing legal sales - "legal trade cloaks illegal trade". However, Pitt's model is

inapplicable in the case of export monopsony as in the case analysed here).

If α is the probability of detection, then α is a function of the quantity of illegal sales given by

$$\alpha = \alpha (X_p) \text{ where } \alpha' > 0 \qquad [6.2]$$

The farmer reduces the chance of being caught by incurring additional expenditure in the form of bribes, increased transport costs for travelling at night, etc. (exclusive of fines). This increases his total short run costs in addition to its variable production costs. Thus, the short-run cost function is given by

$$F(X_o + X_p) = C(X_o + X_p) + S(X_p) \qquad [6.3]$$

with $C'(X_o + X_p) > 0$ and $S'(X_p) > 0$

where $F(X_o + X_p)$ is the total short run cost function,

$C(X_o + X_p)$ is the variable production costs function,

and $S(X_p)$ is the smuggling cost function.

The farmer is assumed to have a Von Neumann-Morgenstern utility function U defined on profit, π, and its goal is to maximise its expected utility of profit. More formally, we write his maximisation problem as:

$$\underset{X_o,\, X_p}{\text{Max}} \quad E\{U(\pi)\} \qquad [6.4]$$

$$\text{s.t. } X_o > 0 \text{ and } X_p > 0$$

where U (π) is the utility of profit function which is concave, continuous and differentiable, that is,

$$U' > 0 \text{ and } U'' < 0$$

and E is the expectations operator.[22]

The farmer's profit function is defined as follows:

if he is successful in smuggling, he gets profits, π_1 and if unsuccessful, he pays a fine B (X_p) and gets profits, π_2. Hence, if he is successful in illegal trade, profits π are defined as:

$$\pi_1 = P_o X_o + P_p X_p - F(X_o + X_p) \qquad [6.5]$$

whereas if he is caught, profits π_2, are defined as

$$\pi_2 = P_o X_o - F(X_o + X_p) - B(X_p) \qquad [6.5a]$$

In the latter case he loses the revenue from illegal sales (seizures) and pays the fine $B(X_p)$, both of which reduces profits. Hence, the expected utility of profit function is given by

$$V(X_o, X_p) = E\{U(\pi)\} = (1-\alpha)\, U_1(\pi_1) + \alpha\, U_2(\pi_2) \qquad [6.6]$$

where the first term is the utility of profit if successful in illegal trade and the second term is the unsuccessful case where caught with probability, α.

In the next section, we derive the conditions for optimal choice of output and sales in the illegal market with the assumption of an uncertain or random fluctuations in the price

[22]Newberry and Stiglitz (1981) provides evidence to show that farmers are risk averse.

received in a neighbouring country. In this, we are still imposing the small country assumption for P_p but is fixed in a stochastic sense.[23]

6.3 Model of Output Choice With Uncertain Border Price

With an uncertain border price, we retain the price taking assumption in a probabilistic sense. That is, we are assuming that the farmer's beliefs about the price in a neighbouring country are summarised in a subjective probability distribution.

Suppose that P_p lies between a lower and upper bound with probability density function $f(P_p)$ in the form

$$P_1 < P_p < P_2 \qquad [6.7]$$

where

P_1 is the lower bound

and P_2 is the upper bound on P_p.

This assumption introduces a further independent source of uncertainty in the model - in addition to the uncertainty of being caught doing illegal trade.

[23]Price volatility in international markets for primary commodities makes this a realistic assumption (Sandmo, 1971).

The farmer's objective function becomes

$$\text{Max } V = E\{U(\pi)\}$$

$$X_o, X_p$$

$$= \int_{P_1}^{P_2} \{(1-\alpha)\, U_1[P_0X_0 + P_pX_p - C(X_0 + X_p) - S(X_p)]$$

$$+ \alpha U_2[P_0X_0 - C(X_0 + X_0) - S(X_p) - B(X_p)]\} \qquad (6.8$$

First-order conditions are given by

$$\frac{\partial V}{\partial x_0} = \int_{P_1}^{P^2} \{(1-\alpha)\, U_1^1[P_0 - C^1(X_0 + X_p)]$$

$$+ \alpha U_2^1[P_0 - C^1(X_0 + X_p)]\} f(P_p)\, dP_p = 0$$

$$\text{if } X_o > 0 \qquad [6.9]$$

$$\frac{\partial V}{\partial X_0} = \int_{P_0}^{P^2} \{(1-\alpha)\, U_1^1[P_p - C^1(X_0 + X_p) - S^1(X_p)]$$

$$- \alpha U_2^1[C^1(X_0 + X_p) + S^1(X_p) + B^1(X_p)]\} f(P_p)\, dP_p = 0$$

$$\text{if } X_p > 0 \qquad [6.10]$$

where (X_o^*, X_p^*) is the solution to the maximisation problem. Second-order conditions are assumed to hold for risk-averse farmers.

Given our assumptions, there are two possible outcomes:

Case 1

The farmer produces for both the official and illegal markets, i.e.

$$X_o > 0 \quad \text{and} \quad X_p > 0$$

This outcome follows from Equation 6.9 and a pluasible explanation for this behaviour is that smuggling costs and penalities are high with the spread between the official and parallel prices narrow. In this case, the farmer will produce for the illegal market until the marginal revenue of selling in that market equals the official price (see Figure 6.1 below). At that point, he switches over to the official market until at the margin

$$P_o = C'(X_o + X_p) \qquad [6.11]$$

with marginal revenue curve ABCD. This is the result that the farmer's choice of output depends only on the official price even though he serves both markets.

Case 2

The farmer produces only for the illegal market, i.e.

$$X_o = 0 \quad \text{and} \quad X_p > 0$$

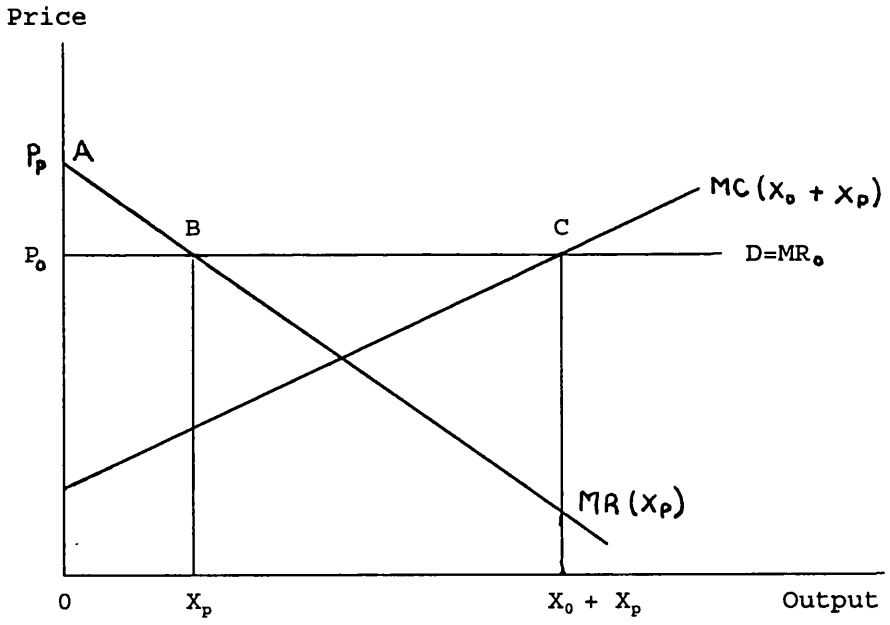
Again, this follows from Equation 6.10. In this case, since smuggling costs anenalties are low and the spread between P_o and P_p is wide, the farmer has no incentive to sell to the official market. He will produce only for the illegal market. Thus, output will depend only on the parallel price, i.e.

$$P_p = MC(X_o + X_p) \qquad [6.12]$$

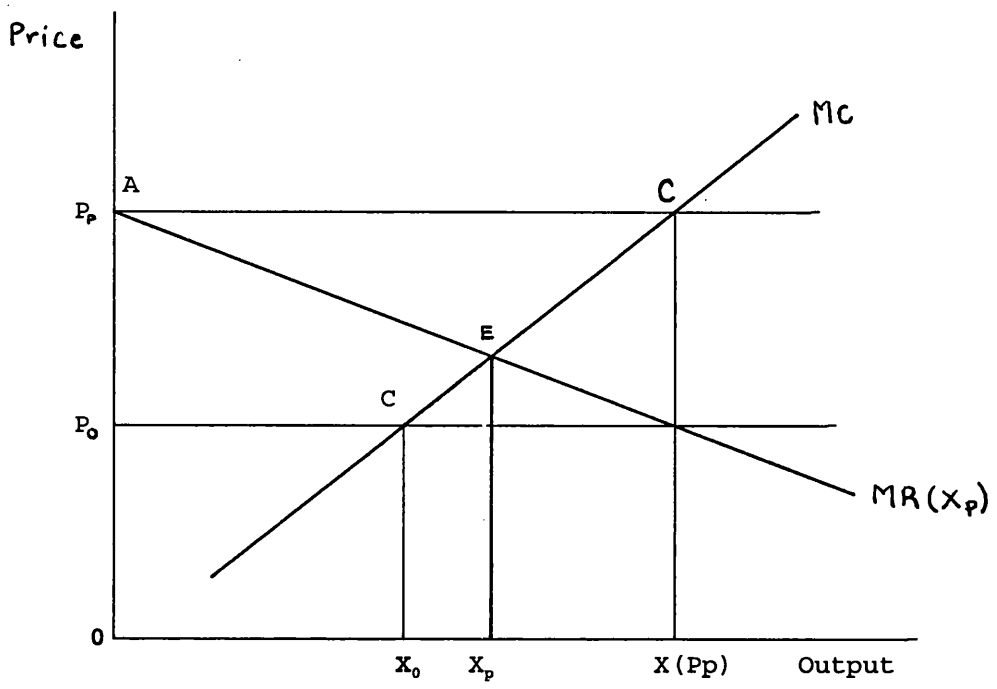
At the point where the marginal revenue from illegal sales equal Marginal cost, Marginal revenue is greater than the official price (Figure 6.1a below). This second case is ruled out since, during the period, with stiff penalties for selling illegally, farmers were known to have served the official market as demonstrated by the official purchases recorded by the marketing agency.

If the risk of being caught selling in the illegal market depends only on the quantities sold in that market and if penalties are high enough, the farmer's output depends only on the official price he is offered. In general, in the short run, the existence of a parallel market increases net revenue (shaded area in figure 6.1) but do not result in additional output.

Figure 6.1 Farmer Produces for both Markets



Figigure 6 .1a: Farmer Sells to the Illegal Market



6.4 Empirical Estimates and Results

The Devarajan et al (1989) result is not general but has the peculiar characteristics that the official price is stable whereas the parallel price is uncertain. One thing to test for using Sierra Leonean data is whether in the presence of an illegal market, the output of coffee producers depends on the official producer price.

For a simple test and to provide empirical support for our theoretical proposition for case 1, we test for the inclusion of P_p, the parallel price in the output function.

In linear form, the equation to be estimated is:

$$X = b_o + b_1 P'_o + b_2 P'_p + U \qquad [6.13]$$

where U is an error term satisfying classical assumptions, P'_o is the real official producer price of coffee, and

P'_p is the real parallel price of coffee to smugglers.

Testing for the inclusion of P_p in the equation above is a simple t-test of $b_2 = 0$.

Annual data for the period 1964 - 1990 are used in the estimation. The data and its sources are given in Tables 6.1 and 6.1a.

For completeness, we run three regressions:

1) Using both real price variables as independent variables, and

2) Using each real price variable as an independent variable on its own.

The results of the regression are provided below. The procedure used for estimation is Ordinary Least Square (OLS) and the number in parenthesis is the t-statistic for each of the coefficients.

Ordinary Least Squares Estimation

Dependent Variable: Production

Independent Variables: P'_o amd P'_p, real official and parallel producer prices respectively.

Number of observations: 28

	COEFFICIENTS			R^2	R^2	DW	SE
	CON	P'_o	P'_p				
Eq.1	4.4717 (3.289)	0.0099 (0.575)	0.0083 (1.526)	0.266	0.207	2.191	3.081
Eq.2	5.2116 (4.002)	0.0296 (2.533)	- -	0.197	0.167	1.975	3.158
Eq.3	4.6921 (3.645)	- -	(0.0107) (2.995)	0.256	0.256	2.187	3.041

SE = Standard Error of Regression

The low values of R^2 for all three equations show that the overall fit is poor. The likely important causes of the poor fit are a combination of omitted variables errors in data measurement, spurious correlations between output and the real producer price (the internal terms of trade) and the parallel price.[24]

The estimated coefficients for the constant term is significant in all equations and has the usual interpretation as the level of output that would be produced regardless of the price.

The estimated coefficients of the price variables have the correct sign but are insignificant (at both the 1% and 5% significance levels) when estimated together. However, both price variables are significant (at both significance levels), when estimated individually and

[24]Since the objective here is to test for the inclusion of the P variable in the output equation, equations have not been estimated with the logs of the variables.

maintained the correct signs. These results suggest that both price variables may influence output independently.

All the regressions show some evidence of negative autocorrelation which may be due to spurious correlations. Overall, the empirical results do not provide support to the theoretical prediction that, in the short run, total output is determined by the fixed official producer price. In the late 1980's, the increased purchases by SLPMB may be explained by increases in producer prices and the increased supplies of rice made available to farmers through produce agents at government subsidised prices. Both factors have encouraged farmers to prune the trees more often, thereby increasing output with less smuggling of the crop.

Table 6.1 Regression Data: Sierra Leonean Coffee

YEAR	PRODUCTION ('000 MT)	REAL PRODUCER PRICE (LE/TON)	REAL PRICE TO SMUGGLERS (LE/TON)
1963	4	61.29	171.82
1964	6	54.29	208.23
1965	4	80.56	189.83
1966	10	71.05	166.72
1967	3	67.50	149.37
1968	4	72.50	170.54
1969	8	73.81	177.82
1970	6	70.45	231.57
1971	10	70.45	185.54
1972	7	67.39	201.13
1973	12	118.37	254.73
1974	3	103.57	247.79
1975	7	82.09	244.05
1976	5	91.03	451.13
1977	10	187.06	732.91
1978	4	169.15	421.67
1979	14	169.79	382.30
1980	10	136.43	498.51
1981	9	83.02	438.41
1982	9	70.79	297.32
1983	5	111.76	313.76
1984	10	93.46	250.12
1985	10	88.20	252.29
1986	15	292.48	761.38
1987	15	103.89	459.47
1988	10	79.12	527.56
1989	9	64.81	257.95
1990	9	38.41	397.64

DATA SOURCES

1. Production figures are from F.A.O., World Crop and Livestock Statistics, 1948-1985 and F.A.O., production YearBook, Various.

2. Real prices are from nominal prices in Table 6.1a using the conversion factors
   1 Kg = 2.2 lb
   1 MT = 1000 Kg

Table 6.1 (a): Coffee Prices, Exchange Rates and Consumer Prices, 1963 - 1990

Year	Nomininal official producer price Le/kg	World price ([a]US Cents/lb N.Y)	Official exchange. rate (period average) Le/US$	Parallel exchange rate[b]	Consumer prices (period average) 1985=100
1963	0.19	34.10	0.71	0.71	3.1
1964	0.19	46.66	0.71	0.71	3.5
1965	0.29	43.75	0.71	0.71	3.6
1966	0.27	40.56	0.71	0.71	3.8
1967	0.27	37.72	0.72	0.72	4.0
1968	0.29	37.36	0.83	0.83	4.0
1969	0.31	40.90	0.83	0.83	4.2
1970	0.31	55.80	0.83	0.83	4.4
1971	0.31	44.71	0.83	0.83	4.4
1972	0.31	52.57	0.80	0.80	4.6
1973	0.58	69.19	0.82	0.82	4.9
1974	0.58	73.34	0.86	0.86	5.6
1975	0.55	82.58	0.90	0.90	6.7
1976	0.71	149.48	1.11	1.07[c]	7.8
1977	1.59	267.14	1.15	1.06	8.5
1978	1.59	165.29	1.05	1.09	9.4
1979	1.89	178.47	1.06	1.11	11.4
1980	1.76	208.79	1.05	1.40	12.9
1981	1.32	186.38	1.16	1.70	15.9
1982	1.43	143.68	1.24	1.90	20.2
1983	3.80	142.75	1.89	3.40	34.0
1984	5.29	149.65	2.51	4.30	56.6
1985	8.82	148.93	5.09	7.70	100.0
1986	52.91	231.19	16.09	27.08	180.9
1987	52.91	106.37	34.04	100.00	509.3
1988	52.91	121.84	32.51	131.61	668.7
1989	70.55	98.76	59.81	180.90	1,088.5
1990	88.19	83.80	151.45	470.60	2,296.2

Notes

a Price of Brazilian coffee.

b Rates are annual average of month-end estimates, based on a sample of transactions. The rates are average across dealers in Freetown.

c Prior to 1976, the official exchange rate is used as a proxy for the parallel rate due to data unavailability. However, given a strong external sector during the period and since the discrepancy between the official and parallel rates in earlier years for which data is available is insignificant, this suggests that the official exchange rate is a suitable proxy.

Sources

1 World price of coffee, official exchange rates and consumer prices are from International Financial Statistics, Yearbook, 1993, International Monetary Fund, Washington, D.C.

2 Nominal producer price figures are from:
   a) Annual Statistics Digest, Central Statistics Office, Freetown, Various.
   b) African Development Indicators, United Nations Development Programme / World Bank, 1992, N. Y. and Washington, D. C.
   c) African Economic and Financial Data, UNDP / The World Bank, 1989.

3 Parallel exchange rates are from World Currency Yearbook, 1985, International Currency Analysis, Inc. Brooklyn, N.Y., and 2b above.

Chapter 7

CONCLUSIONS AND IMPLICATIONS

7.1 Conclusions

The objective of this thesis is to quantify the rents in the economy of Sierra Leone in a particular market in 1986. The sources of rent considered are non-market allocation of rice and foreign exchange and the monopsonistic behaviour of the agricultural marketing board. The results show that the costs of rent-seeking from one controlled commodity are a large share of GDP (5.3%). Adding on totals for other controlled commodities and other markets (eg. foreign exchange) increases the costs of these activities substantially for this small economy. Despite the crude nature of computing these rents, it is obvious that the nature and costs of such unproductive activity contributed significantly to the decline of the economy during the period.

Rent-seeking retards economic growth in two ways:

(i) Through a diversion of resources from productive to unproductive activities, an insignificant proportion of a country's investment and labour is applied toward increasing the output of real goods and services.

(ii) Through a tax on the means of production, it lowers the incentives to invest or work are lowered since rents reduce the net returns to factors.

In this sense, it is important therefore that corrective action is taken to increase the efficiency of government spending and reduce its associated rent-seeking waste while improving the incentive structure at the same time.

The empirical results do not support the theoretical prediction that the official producer price is an important determinant of total agricultural export output. In the short-run therefore, it appears that agricultural output can not be increased by simply raising the producer price. To elicit the desired supply response may require revisiting other policies other than prices alone. Policies that overprice consumer goods and/or the availability or lack of essential consumer goods can have a strong effect on the production response of producers of cash crops. Also, policies which maintain an overvalued exchange rate can have an important influence on output response.

7.2 Policy Implications

Economic efficiency has generally been hindered in the rice and other sectors of the economy on both the production and consumption sides. Food subsidies are an essential social safety net in small economies such as Sierra Leone which can compensate for the lack of social security schemes existing in developed economies. Therefore, food subsidies across-the-board should be maintained but by designing subsidy packages that redistribute income efficiently without destroying the efficiency of resource allocation. For example, ration

coupons that are freely convertible eliminate the waste of queuing.

To address the structural problems of the economy requires the implementation of policies to liberalise the economy. The policy framework for the economic rehabilitation phase calls for economic policies that maintain the incentive framework for eliciting higher production and exports. The implementation of structural reforms so far in the economy are encouraging. The stabilisation phase has realigned relative prices in favour of production and exports, reduced the budget deficit and thereby underlying inflationary pressures, and facilitated the flow of imports to ease the severe foreign exchange constraint faced by the economy. The availability of basic commodities including petroleum and rice has improved considerably. The queues and other activity associated with shortages have since disappeared. For a sustainable recovery and growth of the economy, the authorities must adhere steadfastly to the liberalisation programme and resist pressures to rescind or modify it.

Performance in agriculture is in the short term driven more by weather conditions than changes in the incentive structure. Increase in prices is only one of the elements that influences the farmers' production response. The other is regular supply of inputs and consumer goods at reasonable prices. It is the internal terms of trade that count. The stabilisation of the internal terms of trade with progressive increase in imports as well as the alleviation of the shortage of foreign exchange will create the foundation for a sustained process of agricultural growth and rural diversification.

Another problem is the rapid decay of the rural transport fleet. Road projects will contribute

to the improvement of the roads and the easing of the foreign exchange constraint will facilitate the rebuilding of the transport fleet.

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